DOCUMENT RESUME

ED 403 637 EA 028 170

AUTHOR	Evans, Thomas Jack
TITLE	Elementary Teachers' and Principals' Perceptions of Principal Leadership Style and School Social Organization.
PUB DATE	Aug 96
NOTE	125p.; D.Ed. Dissertation, Western Michigan University.
PUB TYPE	Dissertations/Theses - Doctoral Dissertations (041)
EDRS PRICE	MF01/PC05 Plus Postage.
DESCRIPTORS	*Administrator Attitudes; Administrator Role; Correlation; Elementary Education; *Elementary School Teachers; Leadership; *Leadership Styles; Organizational Climate; *Principals; *School Culture; *School Effectiveness; Statistical Analysis; Teacher Attitudes
IDENTIFIERS	*Transformational Leadership

ABSTRACT

The context of teaching has changed dramatically in the wake of two national waves of educational reform. This dissertation examined the relationship between elementary principals' use of transformational leadership strategies as determined by teacher reports and the presence of social-organizational factors within the schools. The five social-organizational factors included shared goals, teacher collaboration, teacher learning, teacher certainty, and teacher commitment. Eighteen elementary principals and their faculties in a southwestern Michigan school district comprised the sample. Teachers (n=214) responded to both the Multifactor Leadership Questionnaire (B. Bass and B. Avolio, 1990) and the School Organizational Factors Questionnaire (S. Rosenholtz, 1990) for an overall return rate of 54 percent. Seventeen principals responded to the Multifactor Leadership Questionnaire. The data showed a significant correlation (r=.70; p=.00) between teachers' reports of principals' transformational leadership and their schools' social organization. Moreover, principals categorized as high in transformational leadership demonstrated a greater level of transformational leadership and led schools higher in social organization than did principals low in transformational leadership who led schools lower in social organization. Higher transformational principals were associated with schools that demonstrated enhanced levels of social organization reflective of effective schools. In addition, two intervening variables, principals' years of service with their present building and school staff size, were found to be significant predictors of principals' transformational leadership. (Contains 14 tables, 1 figure, and 76 references.) (LMI)

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ED 403 637

ELEMENTARY TEACHERS' AND PRINCIPALS' PERCEPTIONS OF PRINCIPAL LEADERSHIP STYLE AND SCHOOL SOCIAL ORGANIZATION

by

Thomas Jack Evans

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Education
Department of Educational Leadership

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Western Michigan University
Kalamazoo, Michigan
August 1996

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ELEMENTARY TEACHERS' AND PRINCIPALS' PERCEPTIONS OF PRINCIPAL LEADERSHIP STYLE AND SCHOOL SOCIAL ORGANIZATION

Thomas Jack Evans, Ed.D.

Western Michigan University, 1996

The context of teaching has dramatically changed over the last several decades following two national waves of educational reform. Researchers have focussed attention on the social restructuring of schools (Liebermann, 1992) and appropriate leadership strategies, such as transformational leadership (Leithwood, 1993; Sergiovanni, 1990), for achieving comprehensive changes leading toward increased school effectiveness. Leadership that can stimulate "bottom-up" participation from teachers and principals in efforts to restructure schools has been recommended (Rowan, 1990; Sergiovanni, 1994). Therefore, the purpose of this study was to examine the relationship between elementary principals' use of transformational leadership strategies as determined by teacher reports and the presence within the schools of social organizational factors (Rosenholtz, 1989) associated with effective schools. Alternate variables that may explain teachers' reports of their principals' use of transformational leadership were also investigated.

Eighteen elementary principals and their faculties selected within a southwestern Michigan school district served as the sample for this study. Teachers (n=214) responded to both Bass' Multifactor Leadership Questionnaire (1990)

and the School Organizational Factors Questionnaire (Rosenholtz, 1990). Seventeen principals responded to the Multifactor Leadership Questionnaire with an average 54% teacher return rate.

Results of the data analysis demonstrated a significant correlation (r=.70; p=.00) between teachers' reports of principals' transformational leadership and their schools' social organization. Moreover, principals categorized high in transformational leadership demonstrated a greater level of transformational leadership and led schools higher in social organization than did principals low in transformational leadership who led schools lower in social organization. These observed differences between the principal groups provided evidence that higher transformational principals were associated with schools that demonstrated enhanced levels of social organization reflective of effective schools. In addition, two intervening variables, principals' years of service within their present building and school staff size, were found significant predictors of principals' transformational leadership, and therefore, pose rival explanations to the observed relationship between principals' transformational leadership and school social organization.

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ACKNOWLEDGEMENTS

The author gratefully acknowledges the influence, support, and assistance of Committee Chairperson, Dr. Zoe Barley, and committee members Dr. Charles Warfield and Dr. Darrell Clay, each of whom in their special ways enabled the completion of this project.

For their generous support mixed with forthright critiques on drafts throughout the process, many thanks are given to fellow dissertation support group members: Josephine Barrydavis, Dr. Judith Burns, Donald Rupp, Danny Sledge, and Dr. Frank Wippel.

Special thanks are due my parents, Jack and Violet, who continue to serve as valuable examples of lifelong learners.

Many thank yous are especially due my wife, María Teresa, whose encouragement, patience, and love I could always count on. And finally to Elena María, our newborn daughter, I hope this accomplishment may one day serve as an example for you to always set high goals and persevere until you attain them.

Thomas Jack Evans

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CHAPTER I

OVERVIEW

The context of teaching has dramatically changed over the last several decades following two national waves of educational reform. Researchers' attention currently focus upon important issues including the social restructuring of schools (Liebermann, 1992) and appropriate leadership strategies for achieving comprehensive changes (Leithwood, 1993; Sergiovanni, 1990). Leadership that can stimulate "bottom-up" participation from teachers and principals in efforts to restructure schools has been recommended (Rowan, 1990; Sergiovanni, 1994). Transformational leadership (Bass, 1985, 1990), with a developmental orientation toward group members and an overall focus on increasing organizational effectiveness, appears the most compatible leadership style for principals engaged in school social restructuring efforts today (Leithwood, 1993; Sergiovanni, 1990).

Throughout the late 1970's and 1980's, public schools were called upon to reform and become more effective in and accountable for accomplishing their educational goals. In a first wave of reform, many large urban districts and state legislatures responded by increasing bureaucratic controls over curriculum and teaching (Rowan, 1990) through initiatives focused on increased use of direct instruction, increased supervision of instruction, higher levels of basic skills achievement, minimum standards to be met by all students, and widespread testing of outcomes (Furhman, Clune, & Elmore, 1988). A reaction to this approach developed following arguments that bureaucratic controls in schools are incompatible with teachers' professional autonomy and, in fact, may damage teacher morale as a result (Darling-Hammond & Wise, 1985; Rosenholtz, 1987). Thus, in the mid-1980s, a second wave of school reform, the "restructuring movement", formed which advocated decreased bureaucratic controls replaced by working conditions that enhance teachers' commitment and expertise (Rowan, 1990). Emerging from the restructuring movement of school reform was a view of the principal as a critical element in school improvement and reform (Fullan, 1991; Sashkin, 1988), and a greater appreciation for the social organization of schools as workplaces as a factor that distinguishes effective schools from others (Brookover, Beady, Flood, Schweitzer, & Wisenbaker, 1979; Little, 1982; Rosenholtz, 1985, 1989; Rutter, Maughan, Mortimore, Ouston, & Smith, 1979).

In 1990, Rowan developed two models of school organizational design which reflected the themes in school improvement literature associated with the two recent national waves of school reform. He called these two organizational designs control strategies and commitment strategies. He conceptualized the two designs in the following way which is how they will be used throughout the present study:

> The control strategy involves the development of an elaborate system of input, behavior, and output controls designed to regulate classroom teaching and standardize student opportunities for learning, and the expected result is an increase in student achievement. The commitment strategy, by contrast, rejects bureaucratic controls as a mode of school improvement

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> and instead seeks to develop innovative working arrangements that support teachers' decision-making and increase teachers' engagement in the tasks of teaching. The assumption of this approach is that collaborative and participative management practices will unleash the energy and expertise of committed teachers and thereby lead to improved student learning (p. 354).

The commitment strategy, consistent with themes in the restructured schools and teacher professionalism literature (Lieberman, 1988), received attention especially concerning the call to replace hierarchical structures of decision making with collegial patterns of interaction. With this organizational approach, school leadership is more widely shared. Teachers assume greater leadership roles and expanded authority, engage more in collegial relationships to share information and advice more frequently, and are involved in increased teamwork that serves as an integrative device for the school (Rowan, 1990). Lieberman (1992) viewed reforms of the 1990s as serving to develop a new context for teaching by "creating learner-centered schools with teacher involvement in schoolwide decision making and program development" (p. 5).

The literature on transformational leadership supports the view that participatory as opposed to hierarchical systems can result in an individual's commitment to causes greater than himself or herself (Burns, 1978). According to Bass (1985), transformational leaders motivate followers to perform beyond expectations. Followers' original expectation of performance is based on an initial level of confidence in their ability to achieve designated goals and objectives. Transformational leaders affect subordinates' performance expectations by: (a) raising their level of awareness, level of consciousness about the importance and value of designated outcomes, and ways of reaching them; (b) getting them to transcend their own self-interest for the sake of the team, organization, or larger polity; and (c) altering their need level on Maslow's hierarchy or expanding their portfolio of needs and wants (Bass, 1985). By comparison, the non-transformational leader's relations with subordinates is based on the leader's: (a) recognition of what subordinates want to get from their work and attempt to see that they get what they want if their performance warrants it, (b) exchange of rewards and promises of reward for subordinates' effort, and (c) responsiveness to subordinates' immediate self-interests if they can be met by subordinates getting the work done (Bass, 1985). Thus, only the transformational leader is expected to motivate individuals through increased awareness and arousal of higher order needs to initiate long term commitment in service of a common purpose greater than individual self-interest (Yukl, 1989).

The major focus of this study centers on the relationship between principals using transformational leadership strategies and the presence within those schools of social organizational factors (Rosenholtz, 1989) associated with effective schools. In this study, these social organizational factors will be regarded as measures of principals' effectiveness using transformational leadership strategies to attain school improvement successes.

Purpose

The overall purpose of this study is to examine the relationship between principal's use of transformational leadership strategies and the presence of social organizational factors within the schools they lead. In other research (Rosenholtz, 1989), social organizational factors have been shown to be associated with school effectiveness. Rosenholtz's (1985) interpretive theoretical framework of effective schools literature, and her follow-up study of teaching as a social construction (Rosenholtz, 1989) offered a basis for understanding the complex social organization of effective schools. Transformational leaders work to promote group members' professional growth and commitment associated with increased performance and organizational effectiveness (Bass, 1985). Therefore, for this study measures of principals' effective use of transformational leadership strategies are compared to Rosenholtz's (1989) five social organizational factors applied to their schools. If principals who score high on transformational leadership are predominantly found in schools evidencing high social organization, the continued use of transformational methods seems warranted.

Research Questions

Several research questions were formulated to guide this study. They included:

1. Is Bass and Avolio's (1990) Multifactor Leadership Questionnaire an

appropriate measure of transformational leadership in educational settings?

2. Are high transformational principals associated with schools which evidence high social organization?

3. What other variables may account for teachers' report of their principals as high transformational leaders?

Leadership Framework of the Study

In 1985, Bass proposed a model of leadership composed of transformational and transactional leadership strategies. This leadership model advocated the use of transformational leadership to achieve successful organizational effectiveness and improved individual performance. Transformational leadership was conceived as leadership that motivates followers to do more than originally expected (Bass, 1985); whereas by contrast, transactional leadership "occurs when one person takes the initiative in making contact with others for the purpose of an exchange of valued things" (Burns, 1978, p. 19). Transformational leaders achieve superior results from followers by engaging in one or more of four transformational leadership behavioral factors collectively labeled the "Four I's" (Bass & Avolio, 1994) and described as follows.

Idealized influence is defined in terms of followers' reactions to the leader and his or her behavior. Transformational leaders' behaviors lead them to become admired, respected, and trusted role models with whom followers identify and whom they wish to emulate. The leader considers the needs of others over

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his or her own, shares risks with followers, is consistent rather than arbitrary, demonstrates high standards of ethical and moral conduct, possesses and uses referent power, and sets challenging goals for followers (Bass & Avolio, 1994).

Inspirational motivation is displayed by the transformational leader when he or she motivates and inspires those around them by providing meaning and challenge to followers' work. The leader gets individuals' team spirit, enthusiasm, and optimism aroused and involves them in envisioning attractive future states. The leader clearly communicates expectations and personally demonstrates commitment to goals and the shared vision (Bass & Avolio, 1994).

Intellectual stimulation is demonstrated as transformational leaders support followers to be innovative by questioning their own values, beliefs, and expectations, as well as those of the leader and organization and to change their problem awareness and problem solving capabilities. Followers are included in the process of addressing problems and finding creative solutions, and are encouraged to try new approaches without fear of public criticism because of mistakes made or due to a different approach from the leader's (Bass & Avolio, 1994).

Individualized consideration is displayed by the transformational leader in paying attention to each individual's needs for achievement and growth as a coach or mentor resulting in his/her development to successively higher levels of potential. The leader provides new learning opportunities within a supportive environment. The leader recognizes and accepts individual differences in terms of needs and desires. A two-way exchange in communication is encouraged, leader interactions with followers are personalized, and delegation of tasks is intended to develop followers (Bass & Avolio, 1994).

By contrast, the transactional leader exhibits behavior consistent with the two factors; contingent reward and management-by-exception. Contingent reward involves the leader and followers engagement in a positively reinforcing interaction which typifies an exchange facilitating the achievement of objectives agreed to by both parties. Management-by-exception occurs only when the leader intervenes to make some correction. In this study, however, management-by-exception will be disregarded as a factor representing transactional leadership because in other studies (Leithwood, 1993) its relationship with organizational effectiveness measures had been minimal. Contingent reward will serve to represent transactional leadership.

Despite the behavioral distinctions made, Bass (1985, 1990) noted that transformational and transactional leadership are interrelated and that most leaders display strategies of both styles to varying degrees. This highlights a central point in Bass' (1985) leadership model which is that "transactional leadership provides a basis for effective leadership, but a greater amount of effort, effectiveness, and satisfaction is possible from employees by augmenting transactional with transformational leadership" (Bass & Avolio, 1990, p. 31).

Social Organizational Framework of the Study

Based on school effectiveness research, Rosenholtz (1985) wove together the different "effective schools" studies adding knowledge from organizational theory and the sociology of teaching to construct a unified theoretical framework by which to understand the evidence from this body of research. In 1989, she conducted a study of the school as a workplace that tested this theoretical framework by measuring five social organizational factors: (1) shared goals, (2) teacher collaboration, (3) teacher learning, (4) teacher certainty, and (5) teacher commitment. She reported that the important lesson drawn from this research is that "the success of elementary schools is in no small way determined by its social organization" (p. 213).

Rosenholtz (1989) suggested that the center of the mystery of schools' success, if one exists, lies within the structure of the organization's shared goals defined as the unification and mobilization of teachers in pursuit of the same instructional goals. Common goals and ways to attain them enhance the organization's capacity for rational planning and action. Principals support a collaborative effort to increase goal consensus by monitoring teachers' classroom efforts, giving them clear performance based feedback, and setting evaluative criteria with teachers congruent with the workaday goals (Natriell, 1983; Rosenholtz, 1985). In schools with these structures, teachers are more professionally engaged with each other. They converse frequently about their technical professional knowledge which acts to limit the emergence of pedagogical pluralism, and instead strengthens a feedback system among teachers that encourages continual internalization of the school's goals.

In effective schools, Rosenholtz (1989) contended that teacher collaboration was one outcome of teachers' unified, collective thinking. Hence, the social organization of schools affects the degree to which teachers collaborate, that is, make requests for or offers of collegial advice and assistance to others (Rosenholtz, 1989). Norms of collaboration are enhanced through teachers' involvement in decision-making when: (a) technical needs become viewed as problem-solving opportunities; (b) the relevance and usefulness of colleagues' special skills are discovered (Gross, Fisher, Nadler, Stiglitz, & Craig, 1979); (c) awareness develops that all teachers suffer classroom problems which can be lessened through exchanging ideas (Rosenholtz, 1989); and (d) team teaching arrangements exist (Cohen, 1981).

Rosenholtz (1989) reasoned that a school's social organization affects its own capacity for self-renewal; therefore, teachers' opportunities to learn reflect "the extent to which the organization of schools poses restraints or opportunities for professional development" (Rosenholtz, 1989, p. 71). For organizations to remain viable and productive, they must adapt to constantly changing needs, find solutions to new problems, and develop and implement new knowledge, skills, and ideas (Perrow, 1979; Senge, 1990). In schools, goal setting is essential in which teachers and principals exchange information to guide the organization in detecting and responding to new problems and needs arising from changing environmental conditions (Scott, 1981). Through this process, norms of continuous improvement on the part of both teachers and the organization are supported.

Teacher certainty, conceptualized as teachers' belief in the efficacy of their instructional practice (Rosenholtz, 1989), is enhanced by social organizational arrangements that lead teachers to believe in a "technical culture" (Lortie, 1975) and to experiment with their instructional methodology. As a result, teachers should experience themselves as causal agents in their classroom performance which, in turn, should engender greater certainty in a technical culture and their own professional practice (Rosenholtz, 1989). Positive feedback, offering psychic rewards as a measure of their competence and worth, generally derives from being instrumental in students' growth and development (Lortie, 1975) and from recognition imparted by colleagues and the principal (Kasten, 1984; Rosenholtz, 1985).

Finally, Rosenholtz (1989) conceived of teachers' commitment as the extent to which teachers' felt compelled to work. Workplace commitment for teachers results from professional autonomy and discretion enabling them to experience personal responsibility for the outcomes of work. When this is the case, motivation and responsibility also increase helping to avert the converse which is teacher disaffection, absenteeism, and defection (Ashton & Webb, 1986; Blase, 1986). Additionally, no matter the amount of psychic rewards or discretion provided, work must also be perceived as meaningful in order to increase commitment (Hackman & Oldham, 1980). Opportunities for learning, skill mastery, and a sense of challenge and personal progress enhance workplace commitment (Hackman & Oldham, 1980).

In this study, then, the presence within schools of higher levels of Rosenholtz's (1989) five interrelated social organizational factors in association with higher levels of principal's transformational leadership will suggest a relationship indicative of the principal's ability to use transformational leadership strategies to accomplish school reform initiatives. Other variables that alternatively may explain teachers' report of their principals' use of transformational leadership will also be investigated.

Limitations of the Study

A limitation of the study is the strong reliance on teacher perception data regarding principals' exercise of transformational leadership and their schools' social organization. The researcher did not interview any of the teachers or principals, nor was documentation of leadership, decision making, or vision making strategies collected to further verify teacher reports. Teachers' perception may also have been affected by the duration of the data collection process which required more than two months to complete. A number of respondents stated an unwillingness to participate citing time constraints as the reason. Another limitation concerned the choice of Bass' (1985; 1990) operational definition of transformational leadership and use of the Multifactor Leadership Questionnaire to measure the construct in an educational setting. Similarly, the lack of abundant validity evidence supporting Rosenholtz's (1989) instrument measuring social organizational factors in effective schools was a concern. Finally, conclusions of this study are based on teacher reports within only one school district. There is no basis to generalize the findings beyond this setting.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The first section of this chapter reviews literature that considers the relevance of transformational leadership in educational settings during school restructuring initiatives. The next section presents research examining transformational leadership concepts in educational settings as measured by Bass and Avolio's (1990) Multifactor Leadership Questionnaire. Next, research on principals' school improvement strategies associated with transformational leadership concepts are examined. Indicators of school effectiveness are discussed afterwards. Support is presented for using social organizational factors associated with effective schools (Rozenholtz, 1989) as current indicators of principals' effectiveness in achieving school improvements through transformational leadership strategies. Finally, factors that potentially mitigate teachers' perceptions of principals' exercise of transformational leadership are discussed.

Relevance of Transformational Leadership in Education

Transformational Leadership and School Restructuring

Transformational leadership has emerged relatively recently as a supportive and developmental leadership approach toward group members (Bass, 1985; Burns, 1978). Initially recommended for corporate leaders to successfully transform or restructure their businesses to achieve greater productivity (Bennis & Nanus, 1985; Kanter, 1983, 1989; Kouzes & Posner, 1987; Peters & Waterman, 1982; Senge, 1990), Bass' model of transformational leadership has offered a range of leader behaviors shown to promote change and desired outcomes in varied settings (Bass, 1985; Waldman, Bass, & Einstein, 1987; Yammarino & Bass, 1990). Educational leaders particularly in "effective" or "innovative" K-12 schools have also been identified as transformational leaders (Leithwood, 1993; Sergiovanni, 1990). Sergiovanni asserted that practicing value and value-added leadership (based on transformational leadership principles) together "provides the bridge between helping teachers and students meet basic expectations and achieving levels of performance and commitment that are extraordinary" (pp. 4-5).

Hallinger (1992) noted that the role of principals has gradually shifted with the decentralization of authority from the school district to the school site and with expanded decision-making roles for teachers and parents. He emphasized that the principal as a transformational leader evolved out of concerns over the compatibility of principals' as instructional leaders with emerging conceptions of teacher leadership and professionalism. Therefore, the new leadership role requires problem finding and problem solving which essentially describes the work of a transformational leader. As Leithwood, Begley, and Cousins (1990) concluded:

> An emphasis [on instructional leadership] was wholly appropriate and timely to bring to school leadership in the early 1980s when the term gained a widespread following. But 'instructional leadership' conveys a meaning which encompasses only a portion of those activities now associated with effective school leadership (p. 10).

Leithwood (1993) contended that transformational strategies for school leadership were especially important for the challenges facing schools now. He based his reasoning on the belief that school restructuring will continue as a pressing necessity for some time into the future and on the belief that the role of instructional leader, the single most preferred image of K-12 school leadership, is not adequate for addressing such challenges. Leithwood's arguments supporting transformational leadership as more effective in restructuring efforts were developed around the following premises: (a) the means and ends for school restructuring are uncertain, (b) school restructuring requires both first- and second-order changes, and (c) the professionalization of teaching is a centerpiece of the school restructuring agenda.

Transformational leadership strategies also reflect change tactics recommended in early interpretations of school effectiveness literature (Purkey & Smith, 1983) to achieve successful innovations. "The general strategy," reported Purkey and Smith, "is best characterized as one that promotes collaborative planning, collegial work, and a school atmosphere conducive to experimentation and evaluation" (p. 442). More recently, Leithwood and Jantzi (1991) demonstrated that transformational leadership fosters the development of collaborative school cultures and linked the purposes of transformational leadership with the effects of collaborative school cultures on teachers and students. They described the connection as follows:

> A transformational leader helps build shared meaning among members of the school staff regarding their purposes and creates high levels of commitment to the accomplishment of these purposes. Such leaders foster norms and beliefs among staff members about the contribution one's colleagues may make to one's practices. They also encourage openness to new ideas and practices, whatever their source, and careful assessment of such ideas and practices based on their own merits. Both individual and group reflection on purposes and practices and how they might be continuously improved are stimulated by the leader, including encouragement to periodically identify and assess the basic assumptions on which are founded these purposes and practices. These are purposes typically associated with the effects of collaborative school cultures, as well. (p. 8)

Antecedents of Transformational Leadership

The concept of leadership has been defined in many ways by researchers studying it (Bass, 1990; Owens, 1991; Yukel, 1989). Transformational leadership, on the other hand, can be traced to Burns' (1978) introduction of the construct. Burns conceived of transformational leadership as one of two forms that leadership can take, the other form being transactional leadership. Bass (1985) modified Burns' conception of leadership as a choice between two styles at opposite ends of a continuum and proposed that transformational leadership augments the effects of transactional leadership on the efforts and effectiveness of subordinates.

The transformational leader strives to change the organization's core values, basic philosophy, and its technical, financial, and humanistic concerns, while the transactional leader is satisfied to work within the status quo of the existing system. Nevertheless, a number of situational factors relating to the external environment and the internal organizational environment influence whether transformational or transactional leadership will emerge within an organization (Bass, 1985). The external social and economic environment will to some extent effect the processes that arise within an organization including the leadership style. Transformational leadership is more likely to emerge during times of social trouble, rapid change, and discontinuity, and unstable economic marketplaces requiring leaders to "provide new solutions, stimulate rapid response, develop subordinates, and provide reasons for coping" (Bass, 1985, pp. 156-157). Furthermore, the internal organizational environment affects the emergence of transformational leadership which is seen more often in organic rather than mechanistic organizations (Bass, 1985). Bass speculated that:

> ... transformational leadership is most likely to appear in organic organizations where goals and structure are unclear, but where warmth and trust are high, members are highly educated and are expected to be creative. On the other hand, transactional leadership is most likely to appear in mechanistic organizations where goals and structure are clear and/or where members work under formal contracts. (p. 158)

Transformational Leadership in Education

Bass' conceptualization of transformational and transactional leadership offers an important vehicle by which to study leadership in educational settings. Though the study of transformational leadership as conceived and operationalized by Bass (1985, 1990) in education, particularly K-12 school settings, "is clearly in its infancy" (Leithwood, 1993, p. 39), studies reviewed in the next section reported findings supportive of critical components of Bass' leadership theory applicable to education.

Evidence for Bass' Conception in Education

The early presence of transformational leadership in education was demonstrated in Kendrick's (1988) reflective study which provided a description of how one principal developed transformational leadership strategies over time. Adopting Sergiovanni's (1990) four stage value-added leadership model for obtaining extraordinary performance in schools, Kendrick described the transition of her leadership behavior from transactional to transformational. She focused particular attention on the processes used as principal to empower teachers and nurture their commitment.

More specifically, Kendrick recounted the historical progression of that school's culture from one concerned almost exclusively with safety and security to one concerned with the developmental and social growth of young adolescents as well as academic needs. A sequential transition from transactional to transformational leadership behaviors was postulated with certain skills and actions serving as prerequisites for subsequent levels of more complicated behavior. To become a transformational leader, Kendrick stated, requires training "to process and facilitate activities which result in the creation of shared vision, collaboration, ownership, increased levels of professionalism, and empowerment (p. 131)."

Kendrick's study produced important findings toward establishing the transformational leadership construct in educational settings. First, numerous leadership strategies cited illuminated Bass' descriptions of factors comprising transformational leadership; this served to demystify the transformational leadership construct. Second, greater clarity was gained concerning Kendrick's individual developmental process and leadership purposes. Third, consistent with Bass' conception, Kendrick reported that transactional leadership functioned to accomplish lower-order objectives though higher-order objectives were achieved through a transformational leadership orientation. Finally, her exercise of transformational leadership positively affected the school's culture increasing organizational effectiveness as a consequence. This latter finding suggests that the search for accomplishments of transformational leadership strategies may be reflected in the school's social organization.

In 1988, Hoover, like Kendrick, working in educational settings sought evidence supportive of Bass' (1985) conception of transformational leadership. She investigated teachers' and staffs' perceptions of leadership effectiveness regarding principals' use of transformational leadership compared to transactional leadership. Hoover used Bass' (1985) Multifactor Leadership Questionnaire among headmasters of private secondary schools in the southeastern United States to determine whether the same transformational and transactional factors that Bass found among Army officers and business supervisors would occur within an educational population. The 45 participating schools, randomly selected from the Southeastern Association of Independent Schools membership directory, provided a list of teachers and staff from which five subordinates were randomly selected and asked to complete the Multifactor Leadership Questionnaire.

Hoover conducted a factor analysis which she compared with two prior factor analyses (Bass, 1985; Hater & Bass, 1988) using the same instrument. She found that the comparison of the factor analysis she produced with two previous factor analyses yielded similar factors. Thus, the transformational and transactional leadership factors configuration that Bass (1985) had originally found was supported within the tested population of private secondary school headmasters. Furthermore, a leader effectiveness index correlated with transformational and transactional factor scores was found much more strongly related with transformational leadership factors than with transactional leadership factors.

More recently, Kirby (1992) reported that transformational leadership was perceived as more effective over transactional leadership concerning leaders' performance by a group of school administrators who rated their immediate supervisors. In Kirby's (1992) study of leadership in education, the purpose was to determine the extent to which educational leaders were perceived to use transformational and transactional leadership behaviors. For this study, 103 practicing educators made up of 88 principals and eight assistant school administrators from six different school districts completed Bass' Multifactor Leadership Questionnaire with reference to their immediate supervisors. Using a stepwise regression procedure that entered transactional factors first into the regression model followed by transformational factors, Kirby found that transformational leadership accounted for an additional percentage of variance beyond that of transactional leadership alone concerning perceptions of leaders' effectiveness performance. Kirby interpreted the results as providing evidence for the existence of transformational leadership in education and subordinates' increased preference for leaders' use of it.

Kirby (1992) designed a separate qualitative study to further increase understanding of extraordinary leadership in education. A sample of 58 graduate students enrolled in an introductory class in school leadership included public school teachers (60%) and administrators (40%) from 15 different school districts in one southern state. They were asked to think of an extraordinary leader in education with whom they had worked and to describe an event in which they had participated that best exemplified that person's leadership. Then students were asked to complete Likert-scale items assessing their difficulty in identifying an extraordinary educational leader. The narratives of nine students, who had no difficulty identifying an extraordinary leader as evidenced by the highest score possible on all questions constituted the sample for further analysis. To determine the behaviors and characteristics of these extraordinary leaders in education, phrases, sentences, or sentence groups in the narratives were coded into themes: setting/event, goals, leader behaviors, leader characteristics, and outcomes. Data were analyzed by examining within and across coding categories to discover themes and patterns of responses.

Based on qualitative analyses Kirby (1992) concluded that those educators who easily identified an extraordinary educational leader were able to indicate specific attitudes and behaviors that made such leaders unique. Kirby's quantitative and qualitative studies both supported the conclusion that transformational leadership can be found in educational settings, a finding common to Kendrick's (1988) and Hoover's (1988) work.

Several years prior to Kirby's work, King (1989) conducted a study for the purpose of exploring the relationships of transformational and transactional leadership as a means of enhancing organizational effectiveness in education. Transformational leadership factors as operationalized on Bass and Avolio's (1988) Multifactor Leadership Questionnaire, were examined for any augmentation effect in perceived effectiveness beyond that accounted for by transactional leadership factors. The variable, effectiveness, constituted a subscale of the Multifactor Leadership Questionnaire.

The sample was drawn from graduate students of a large urban state university in the South who were also employed in the field of education and from the membership roll of a regional chapter of an academic organization in the field of education. Membership for this chapter represented individuals largely involved in higher education in institutions both public and private, large and small, college and university. Eighty individuals drawn from each source voluntarily participated.

Using a stepwise regression procedure, King (1989) entered the factors constitutive of transactional leadership into the model first and then added the factors representing transformational leadership. Regression analysis of the data confirmed King's hypothesis that the transformational leadership factors accounted for an additional percent of the variance in perceptions of the leader's effectiveness. Nevertheless, King recommended that alternate measures of effectiveness and broader school outcomes be used in future tests for transformational and transactional leadership in education. This latter recommendation, addressed below by Silins (1992), is of central interest to the present study which proposes to examine the feasibility of using social organizational factors associated with effective schools (Rosenholtz, 1989) to reflect principals' effectiveness in using transformational leadership strategies during school improvement initiatives.

In the next section, research reviewed turns from explorations into transformational leadership's presence, greater effectiveness, and preference by subordinates in education to various studies that supported linking successful school improvement change strategies of principals with the concept of transformational leadership. The main focus of these studies was to identify the type of strategies school administrators used to successfully promote school improvement. Then, each study examined the identified strategies for their association with the transformational leadership construct. Taken together, the successful school improvement strategies of principals were found identical to transformational leadership strategies.

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Principals' Transformational Leadership Strategies

Leithwood and Jantzi (1991) studied the strategies principals used to develop more collaborative school cultures. Their sample consisted of nine elementary and three secondary schools from ten different boards of education widely distributed across southern Ontario.

Results from this study suggested that principals used six strategies to shape their school's culture and to encourage greater collaboration: (1) strengthening the culture; (2) use of a variety of bureaucratic mechanisms to stimulate and reinforce cultural change; (3) promoting staff development; (4) communicating cultural norms, values, and beliefs; (5) sharing power and responsibility; and (6) expressing cultural values through symbols. On the whole, Leithwood and Jantzi (1991) judged that these strategies constituted transformational leadership. Additionally, the researchers found support indicating that principals' actions were a significant part of the restructuring process. They emphasized that principals' access to transformational strategies can assist in the development of collaborative school cultures by affecting staff's individually and collectively held shared understandings of their current purposes and practices, and through an enhanced capacity to solve future professional problems. The results of this study supported the researchers' premise that transformational leadership is associated with strategies most likely to foster the development of collaborative cultures.

The intent of a study by Leithwood, Jantzi, and Dart (1991a) was to develop a more coherent conception of policy implementation processes based largely on commitment strategies in the context of school reform. To develop a conception of policy implementation processes, data were sought to provide insight into the in-school leadership actions taken to foster a policy developed by the British Columbia Ministry of Education and what the actions' relationship was to policy implementation outcomes. The policy was intended to reform educational practices for students' first three years of elementary school. The sample included twelve schools evenly divided across three districts.

The results provided the researchers three insights about leadership which fostered teachers' commitment to change. First, such leadership is frequently distributed across several roles including teachers, principals, and consultants. Second, based on their expertise, those with formal school leadership authority must assume a significant amount of the school's leadership. Third and most importantly, leadership practices for change that emerged from this study were associated with four transformational leadership dimensions adapted from Bass (1985): vision, group goals, individual support, and intellectual stimulation. The most exciting prospect emerging from this study, stated Leithwood, Jantzi, and Dart (1991a), was the possibility of forging the findings into a coherent theory of leadership for change. The researchers recommended the development of a well-tested theory of transformational leadership in education.

In a second study, Leithwood, Jantzi, and Dart (1991b) investigated how principals' school improvement strategies promoted teacher development. The researchers hypothesized that the leadership strategies identified as providing motive and opportunity for teacher development would be ones that related to the concept of transformational leadership. Data were collected through a survey and interviews conducted throughout 47 schools involved in school improvement projects. The researchers found that leader strategies that provided opportunities for teacher development and were seen as associated with the concept of transformational leadership were identified as: (a) providing resources and ensuring their availability, (b) helping teachers assess their own needs, (c) fostering the development of a collaborative school culture, and (d) distributing the responsibility for teacher development broadly throughout the school.

Leithwood, Jantzi, and Dart's (1991b) study demonstrated transformational leadership strategies within education related to teachers' development. Their study showed individual consideration of teachers' needs for growth through delegated responsibility and participation in decision-making. Bass (1985) regarded transformational leadership as "likely to generate more effort, creativity and productivity in the long run" (p. 30) achieved, in part, through individualized attention and a developmental orientation toward subordinates. Similarly, Rosenholtz (1989) found that principals influence teachers' professional development by promoting their access to learning opportunities, occasions to collaborate and set shared school goals, and providing for them certainty in a technical core of professional practice.

Leithwood and Steinbach (1991) investigated group problem solving

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processes that principals used with their staffs. Three theoretical constructs were used to direct the researchers search for evidence of transformational leadership in the specific practices of effective principals. Evidence of transformational leadership was sought in the means used by principals to generate better solutions to school problems; to develop teachers' commitment to implementing such solutions, and to foster long-term staff development. The sample consisted of four elementary principals designated as "experts" and five designated as "typical".

Evidence was found that expert principals used specific problem solving practices consistent with the concept of transformational leadership. The researchers pointed out that the everyday act of group problem solving offers principals many opportunities for exercising transformational leadership but typical principals do not make use of these opportunities. They concluded that practices associated with transformational leadership were particularly clear in the solution processes of expert principals. Expert principals exemplified open-mindedness, honesty, care, and attention to the group's needs and thought processes which contrasted starkly to the solution processes of typical principals who tended to rely on less collaborative models of problem solving.

Findings from Leithwood and Steinbach (1991) supported the notion that expert principals used group problem solving practices that are transformational leadership strategies. Principals display these transformational problem-solving strategies as well in effective schools which promote norms of collegial professional practice and regularly join principals and teachers in problem-solving activities (Darling-Hammond & Wise, 1992; Little, 1982; Rosenholtz, 1989).

Finally, in 1992, Silins investigated whether survey data from elementary teachers involved in school reform initiatives demonstrated that the presence of transformational leadership resulted in teachers' enhanced perception of school improvement outcomes beyond the level associated with transactional leadership. Elementary schools in British Columbia were the focus of a survey that provided the data for analysis of the impact of leadership on schools as organizations. Surveys were mailed to a random sample of 2,547 teachers in 406 elementary schools representing 25 districts in the province.

Silins (1992) conceptualized transformational and transactional leadership consistent with Bass' (1985) model and regarded the factors comprising each as independent variables. A total of four dependent variables were chosen to represent school improvement outcomes: (1) school effects, (2) teacher effects, (3) program and instruction effects, and (4) student effects. Analysis of the survey data supported the presence of transformational and transactional leadership styles in a context of school improvement. Transformational leadership accounted for additional variance in teachers' perceptions on three of four school outcomes beyond the variance accounted for by transactional leadership. Silins (1992) regarded this as support for the argument that school leaders can promote change more successfully through strategies associated with transformational leadership than reliance upon procedures, rules, or reward systems.

Studies in this section demonstrated several important findings. First, data from these studies confirmed the principals' essential role in providing leadership and promoting school improvement change efforts. Second, strong evidence emerged for associating successful school improvement change strategies with transformational leadership. Third, further research using new measures of leadership effectiveness was suggested. The present study used social organizational factors associated with effective schools to measure principals' effectiveness in exercising transformational leadership strategies to accomplish school improvement successes. Research undergirding Rosenholtz's (1989) framework of social organizational factors explaining school effectiveness are reviewed in the next section.

Indicators and Organization of Effective Schools

Much time and effort has been spent by educational researchers trying to gain a better understanding of the characteristics that distinguish one school from another in terms of student educational attainment. Research suggests that even when serving similar populations some schools compared to others have been more effective at educating students (Brookover & Lezotte, 1979; Clarke, Lotto, & Astuto, 1984; Edmonds, 1979; Edmonds & Fredrickson, 1978; Weber, 1971). Social organizational factors commonly cited throughout school effectiveness research include: strong principal leadership, teacher development, and collaborative work norms. The present study proposes using social organizational factors (Rosenholtz, 1989) to reflect the effectiveness of principals' transformational

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leadership strategies in attaining successful school improvements.

Indicators of Effective Schools

Early literature reviews (Austin, 1981; Edmonds, 1979; Phi Kappa Delta, 1980; Tomlinson, 1980) reduced the disparate school effectiveness literature to simpler recipe-like lists of variables believed accountable for and potentially able to guide school improvement efforts. This research has largely been carried out in elementary schools and described the specific features appearing in effective schools. Later, integrative reviews attempted to meaningfully combine lists of variables into explanatory frameworks (Cohen, 1983 cited in Good & Brophy, 1986; Purkey & Smith, 1983). More recently, Rosenholtz (1989) developed a comprehensive descriptive framework of how school organization at the district, school, and classroom levels influences instructional practice.

Cohen (1983 cited in Good & Brophy, 1986) interpreted the accumulated research on schooling practices that contribute to student achievement. He emphasized that existing summaries are useful to a point but that the presentation of only lists of variables failed to provide insight on how such variables are interrelated, able to actually be implemented, or produce effects. Cohen concluded that effective schools differ notably from most other schools because: (a) they are better managed; (b) their work is more frequently directed toward appropriately limited, shared goals; and (c) instructional practices are more advanced and consistent with the most recent research.

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The same year Cohen offered his framework for interpreting effective schools research, Purkey and Smith (1983) contributed an integrative literature review of extant studies. Their comprehensive review was instructive because it included a wide range of research approaches including outlier studies, case studies, and program implementation evaluations. They also presented a tentative profile of an effective school.

The outlier studies reviewed by Purkey and Smith (1983) statistically identified highly effective and uniquely ineffective schools, then examined the behavior within those schools to determine what accounted for the differences. In four of seven studies the most common elements of effective schools were better control or discipline and high staff expectations for student achievement. An emphasis on instructional leadership by the principal or other important staff member was also found in three studies.

Six case studies reviewed by Purkey and Smith (1983) examined a total of 43 schools all of which were urban elementary schools. They reported that five factors were common to most, but not all, of the six case studies. These factors included: (1) strong leadership by the principal or other staff, (2) high expectations by staff for student achievement, (3) a clear set of goals, (4) an academic emphasis for the school and an effective school-wide staff training program, and (5) a system for monitoring student progress. A focus on discipline and order was also found important in two of the studies.

Purkey and Smith (1983) also examined six program evaluation studies.

They noted that though these studies were generally methodologically stronger than the outlier or case research studies, their findings were consistent with the other studies and commented:

> Most schools with effective programs are characterized by high staff expectations and morale, a considerable degree of control by the staff over instructional and training decisions in the school, clear leadership from the principal or other instructional figure, clear goals for the school, and a sense of order in the school. This is a familiar list. (p. 438)

Purkey and Smith, like Cohen (1983), argued that rather than continuing to focus attention on lists of potential variables associated with effective schools, what was needed was direction for meaningfully combining such variables. In response, they offered a tentative profile of an effective school composed of two sets of variables identified as organization-structure variables and process variables to arrive at a notion of school culture. Process variables included: collaborative planning and collegial relationships; sense of community; clear goals and high expectations commonly shared; and order and discipline. Purkey and Smith (1983) regarded process variables as the dynamic of the school responsible for an atmosphere that leads to increased student achievement. The way by which this might occur "suggests a participatory approach based on the notion that *how* a school moves toward increasing effectiveness is critical" (p. 446). They concluded that a school culture model assumed that consensus among the staff of a school is more powerful than overt control and that "building staff agreement on specified norms and goals becomes the focus of any school improvement strategy" (pp. 441-442).

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Purkey and Smith's (1983) effective school profile based on a cultural perspective rejected the view of schools as relatively static constructs of discrete variables in favor of a conception that schools are dynamic social systems made up of interrelated factors (Brookover et al., 1979). Their model assumed that changing schools required changing people's behaviors and attitudes, as well as the school organization and norms. Rosenholtz (1985; 1989) shared a similar perspective; however, her theoretical framework explained more completely how a school moves toward increasing effectiveness. Hence, Rosenholtz's framework which recognizes the interrelationship of leadership with various social organizational factors served in the present study as an effectiveness measure of principals' transformational school improvement strategies. Her (1985) theoretical framework is discussed next in greater detail.

Rosenholtz (1985) set out to determine the nature of activities that distinguish effective schools from less effective schools. She explained that principals of effective schools have a unitary mission directed at improving low student achievement. Their actions convey certainty that teachers can improve student performance and that the students are capable of learning. Teachers are organizationally buffered by principals who attend to the material requirements and organization of instructional program, provide clerical assistance for routine paperwork, mobilize outside resources to assist teachers with nonteaching tasks, and minimize frequent classroom interruptions. Furthermore, principals regularly observe teachers to monitor the academic progress they are making with students.

This activity provides teachers with specific, concrete goals toward which to direct their efforts and the certainty of knowing when those efforts produce the desired effects. Principals in effective schools also encourage participative decision making with teachers concerning technical matters such as selecting instructional material, determining appropriated instructional methods, and establishing general instructional policies. Norms of continuous improvement are promoted which represent a collective form of problem solving, social support, and ongoing professional development. Thus, under such conditions, when students demonstrate academic accomplishments teachers derive their primary psychic rewards from students' success and are motivated to continue working. The more students learn the greater becomes teachers' certainty in their capacity to affect student growth and development. A positive spiral forms leading to increased teacher experimentation and success with the technical core of school.

Rosenholtz (1985) described the interrelated dynamics of an effective school and highlighted the central role of principals in affecting school improvement through strategies clearly associated with transformational leadership. In short, she explained school success placing great emphasis on the primacy of shared organizational goals, the need for principals' leadership to mobilize teachers to work together to combat low student achievement, and teachers' certainty about their professional practice. Taken as a whole, one can infer from Rosenholtz's discussion that a relationship exists whereby effective principals use school improvement strategies associated with transformational leadership to enhance the presence in schools of social organizational factors associated with effective schools. Principals' effectiveness in achieving school improvement using transformational leadership strategies, therefore, should be reflected in schools by the presence of five social organizational factors identified by Rosenholtz (1989).

Social Organizational Factors of Effective Schools

School effectiveness research has offered descriptions and lists of indicators of effective schools which show what an effective school looks like. Lieberman and Rosenholtz (1987) claimed, however, that increased effectiveness is better thought of as a process of becoming. Short-sighted prescriptions and quick fix school improvements representative of control strategies, they argued, masked the content of changes in curriculum and pedagogy and the organizational processes needed to make real school improvement possible.

In 1987, Lieberman and Rosenholtz reported the case study of Cityside, an urban inner-city school in a large metropolis, where organizational conditions had been modified to facilitate more collegial relations among teachers and the principal. Organizational conditions focussed upon included the principal's vision; his building of a core support group of teachers; and his consistent, long-term strategy for change. Lieberman and Rosenholtz concluded that the process by which a school becomes "effective" is quite complex. Nevertheless, they believed that the principal's vision and behaviors aided in accentuating for all school personnel which priorities were of greatest concern. As previously discussed, transformational leadership literature emphasizes a developmental approach concerning individuals and organizational change.

Little (1981) demonstrated how social organizational changes initiated by the principal may lead to greater effectiveness. Her study of the implementation of mastery learning in the Denver city schools provided insights into how such changes take place through successful staff development. Six urban, desegregated schools were selected three of which were elementary and three secondary schools. They represented a range of involvement in schoolwide staff development projects and of achievement of school success.

Little (1981) documented how principals worked with teachers to change norms of behavior and programmatic routines by: (a) announcing expectations for shared work and conversation, (b) allocating resources and rewards for working jointly, and (c) providing daily opportunities for interaction among teachers. In particular, Little found that more successful schools were distinguished from less successful ones by the prevailing patterns of approved and disapproved interactions in each school. Of all the collegial interactions observed, Little suggested that discussion of classroom practice, mutual observation and critique, shared efforts to design and prepare curriculum, and shared participation in the business of instructional improvement appeared most crucial in achieving continuous professional development. These four classes of critical practice occurred widely throughout the school building and were discussed in greater frequency and regularity in more successful schools. Interaction about teaching in successful schools focused upon teachers' practice resulting in a common language by which teachers could describe, analyze, interpret, and evaluate their teaching. Little concluded that staff development appeared to have the greatest prospects for influence where there existed prevailing norms of collegiality and continuous improvement as these norms served to shift interaction about teaching from an individual pursuit for improvement to an organizational phenomena. Little's study provided important insight into understanding how effective schools developed and highlighted principals' strategies that encouraged the establishment of new norms of collegiality and methodological experimentation to replace former norms of isolation, conservatism, and restraint.

Conley (1991) provided support for increasing teachers' level of participative decision making and focused attention on the principal-teachers relationship as critical. Her extensive review of research examined teacher participation in school decision making as a means of enhancing their professional practice and working environment. Conley concluded that lack of participation deprives teachers of the decisional power they expect leading to dissatisfaction, stress, or work alienation. She affirmed the need for professional cooperation between principals and teachers, and ventured to define a realistic middle ground toward which the current participation debate should evolve. Conley suggested a position "based on management's recognition of teachers as professional and teachers' recognition that they work in an organizational setting requiring coordination with supervisors and peers" (pp. 256-257).

Darling-Hammond and Wise (1992) highlighted principals' important influence upon teachers' collaboration and professional development in relation to the creation and maintenance of effective schools. They underscored joint principal-teachers participation in decision making as a means toward school improvement as follows:

> ...participatory school management by teachers and principals, based on collaborative planning, collegial problem solving, and constant intellectual sharing, produces both student learning gains and increased teacher satisfaction and retention (Mackenzie, 1983; Pratzner, 1984). Clearly, these schools also feature principals who are effective leaders, and studies show that such principals create conditions that encourage teacher leadership, peer support and assistance, and participation in decision making (p. 1365).

Darling-Hammond and Wise (1992) concluded that the habit of inquiry permeates effective schools improving standards of teaching practices through decreased teacher isolation and increased direct experience with relevant opportunities for professional growth. They urged greater teacher participation in decision making to enable an ongoing review of practice. Such a mechanism, they believed, would serve to monitor organizational activities and establish a continuous dialogue about problems of practice among practitioners who usually have little or no authority to create conditions more conducive to effective teaching. In all, Darling-Hammond and Wise's study indicated that professional norms and conditions will likely be found in schools undergoing reforms guided by principals using transformational leadership strategies.

The work of Berry and Ginsberg (1992) further stressed the importance of principal-teachers collaborative relationships. They examined evidence on the nature of effective schools and their relationship to teachers and school leaders. They suggested that education reform will work only when responsive to the demanding realities of school life and the work of teachers and principals.

Additionally, Berry and Ginsberg (1992) reemphasized Lieberman and Rosenholtz's (1987) recommendation of viewing effective schools practices as means as well as ends because, they asserted, the process of creating effective schools is more appropriately conceptualized as a continuous cycle of improvement and renewal. Berry and Ginsberg used the term "praxis" to describe the direction that effective schools are moving. Under this condition, teachers and principals work jointly to better understand their practices while simultaneously improving them. From this perspective, effective schools are not imbued with static qualities, instead, principal-teachers collaborative relationships become a necessity for achieving continuous school improvements. Berry and Ginsberg suggested that teachers may become instructional leaders of their own classrooms while principals become leaders of leaders.

Berry and Ginsberg (1992) pointed out the need for facilitative leadership in effective schools and for teachers as active collaborators in the improvement process. Collaboration between principals and teachers was held as a prerequisite for cyclical school improvements. Their findings suggest that principals' leadership must be of a kind capable of transforming organizations in a systemic manner relying on cooperation instead of competition to achieve the desired aims. Finally, a description of social organizational factors illustrative of effective schools, attained in large part through principals and teachers collaborative work, is reported from Rosenholtz's (1989) study of effective schools.

Taking a social organizational perspective, Rosenholtz (1989) conducted a study of the school as a workplace to test her (1985) theoretical framework describing the dynamic combination and interaction of variables in effective schools. The sample consisted of 72 elementary schools in eight school districts in Tennessee with 1,213 total teachers participating. The districts represented a diverse sample, with five rural and three urban/suburban districts. School size varied from five to 42 teachers.

Throughout Rosenholtz's (1989) study, main findings revealed the important collaborative role of principals in developing new principal-teachers relations to achieve greater school effectiveness. She stated that only recently researchers have begun to understand how schools' social organization can be altered to make teaching a more professional activity. To advance that understanding, she offered central findings associated with each of this study's five outcome measures: (1) shared goals, (2) teacher collaboration, (3) teacher learning, (4) teacher certainty, and (5) teacher commitment.

Rosenholtz (1989) concluded that the social organization of schools renders meaning to the nature of teaching. Her research demonstrated a strong relationship between teachers' norms of behavior and patterned interactions, and their potential for professional development and growth. That is, workplace conditions affected not only the culture of a school but also the way by which teachers engaged in their own learning and ultimately contributed to school improvement. She emphasized the need for principal leadership associated with transformational leadership strategies that challenged teachers' to imagine and experiment with new solutions to impending problems, and encouraged staff to work jointly toward increasing student achievement levels.

Research in this section pointed out that social organizational factors (Rosenholtz, 1989) that distinguish the nature of effective schools from others remain a focus of current school restructuring research and policy implementation designs. In particular, research demonstrated the powerful impact that principals' school improvement strategies associated with transformational leadership can have on school effectiveness when a school's social organization is changed to promote more collaborative principal-teachers relationships. As teachers and principals worked together collaboratively, new norms for schools developed creating the potential for whole new roles, relationships, and expectations among teachers. An empowering, inclusive type of leadership practice was demonstrated consistently by principals across various effective schools (Berry & Conley, 1991; Darling-Hammond & Wise, 1992; Ginsberg, 1992; Rosenholtz, 1989). Hence, principals most capable of bringing about school reform improvements appeared to employ transformational leadership strategies. Principals' effective use of transformational leadership in the present study is indicated by the presence of social organizational factors associated with effective schools (Rosenholtz, 1989). This investigation into the perceived effectiveness of principals' use of transformational leadership strategies also considered potential intervening variables.

Intervening Variables of Transformational Leadership

In the next chapter, a number of research questions are listed for this investigation into relationships involving principals' use of transformational leadership and the presence within their schools of social organizational factors associated with effective schools. Other variables that might potentially explain teachers' report of their principals' use of transformational leadership were also addressed including: faculty size; principals' gender and length of service in their present building; and teachers' gender, ethnicity, and years worked with their present principal.

These factors were of interest for the following reasons. Faculty size, for example, potentially shapes the effect of principals' use of transformational leadership depending on the ease of teacher and administrator contact. The larger the school, the fewer opportunities for substantive interaction (Rosenholtz, 1989). Administrators' gender has been found to be related to the result when the Multifactor Leadership Questionnaire is used. That is, female leaders tend to score higher in transformational and lower in transactional leadership than males (Bass & Avolio, 1990). Length of administrative service also has implications for the perceived effective use of transformational leadership strategies (Salley, McPherson, & Baehr, 1978). Administrators with lengthy experience may be more likely to promote instructional leadership practices considered effective in the past but which are now equated with transactional rather than transformational leadership (Sergiovanni, 1992). Whether subordinates are of the same or opposite gender as the leader affects subordinates' satisfaction ratings of their leaders as well. For instance, though many women preferred working for a man (Ferber, Huber, & Spitze, 1979; Robie, 1973), women with higher levels of education favored women managers. Finally, evidence that indirectly indicates that ethnicity will affect leader-subordinate interactions comes from Sattler's (1970) review of studies on the influence of race on behavior in interviews. In essence, respondents tended to give socially desirable responses to interviewers of other ethnic groups than their own whether or not the input reflected the respondents' true feelings.

Summary

The literature reviewed examined three major areas. These included: (1) the relevance of the transformational leadership construct to education, (2) the presence of transformational leadership in educational settings, and (3) indicators and the organization of effective schools.

The first section addressed the emerging role of principals as transformational leaders especially during school restructuring efforts. Research indicated that transformational leadership practices were consistent with change strategies recommended in school effectiveness literature.

The second section reported research findings supportive of critical components of Bass' transformational leadership theory in educational settings. Successful school improvement change strategies of principals were found identical with Bass' concept of transformational leadership.

The third section examined indicator lists and explanatory frameworks of effective schools. Social organizational factors associated with effective schools were also discussed. Research tended to suggest that school improvement strategies associated with transformational leadership enhance the presence in schools of social organizational factors associated with effective schools.

CHAPTER III

METHODS AND PROCEDURES

This chapter addresses methods and procedures used to investigate research questions guiding this study. In particular, the following topics are discussed: (a) sample, (b) instrumentation, (c) data collection, (d) research questions, and (e) data analysis.

This study utilized: (a) Bass and Avolio's (1990) Multifactor Leadership Questionnaire to obtain principals' ratings as transformational leaders, and (b) Rosenholtz's (1989) Social Organizational Factors Questionnaire to determine the level of presence within a school of social organizational factors associated with effective schools. Ratings from both instruments were compared between principals and their staffs for all schools. Teachers' and principals' perception of principals' use of transformational leadership were compared to Bass' prior work with subordinates and supervisors in different settings. Finally, factors that potentially explain teachers' report of their principals' exercise of transformational leadership were addressed.

Selection of the Sample

The sample for this study included all elementary principals and their faculties, eighteen schools in total, within a single school district in southwest

Michigan. Use of a single district reduced confounding the research with varying district contextual factors including the influence of the superintendent. The district selected had demonstrated commitment to participatory approaches of school governance without already having been identified as exceptionally effective. An environment of district-wide reform initiatives offers favorable conditions for the exercise of transformational leadership which elementary principals conceivably had the opportunity to demonstrate.

Instrumentation

Two questionnaire instruments were used to collect information from participants. One was an adaptation of Bass and Avolio's (1990) Multifactor Leadership Questionnaire which allowed self-rating by a supervisor and supervisee rating the supervisor. The other instrument was comprised of Rosenholtz's (1989) scales of social organizational variables associated with effective schools and for this study was titled School Organizational Factors Questionnaire.

Multifactor Leadership Questionnaire

The Rater and Self-Rating versions of the Multifactor Leadership Questionnaire are identical in format except for the rewording of items for respective respondents. The Multifactor Leadership questionnaire contains 80 items of which the first 70 ask for a five-point Likert response indicating the frequency that the leader exhibits a particular behavior or evokes a certain response. The response options range from "not at all" to "frequently, if not always." Within this portion of the questionnaire are embedded items representing each of seven leadership factor subscales and one of three outcome factors, extra effort by followers (3 items). Transformational leadership is represented by four of the leadership factor subscales: idealized influence (10 items), inspirational motivation (7 items), intellectual stimulation (10 items), and individualized consideration (10 items). Transactional leadership is represented by the two factor subscales, contingent reward (10 items) and management-by-exception (10 items). A seventh factor subscale represents the factor laissez-faire (10 items), that is, nonleadership. Of the remaining ten questions, four ask respondents to respond to their leader's effectiveness with one of five options provided ranging from "not effective" to "extremely effective." Respondents are asked two questions about their satisfaction with their leader's abilities and methods choosing one of five response options ranging from "very dissatisfied" to "very satisfied". Next, respondents are asked to select the best description of the level of their position in the organization, their primary educational background, the highest existing level in the organization, and the representativeness of the questionnaire to their leader's performance. Lastly, optional demographic information is requested of respondents.

Reliability of the Multifactor Leadership Questionnaire

Reliabilities for each scale on the Rater and Self-Rating versions of the Multifactor Leadership Questionnaire were established with Cronbach alpha measures (Bass & Avolio, 1990). A listing of the alpha reliability coefficients for the Rater version followed in parentheses by coefficients for the Self-Rating version are: idealized influence .90 (.83), inspirational motivation .84 (.60), intellectual stimulation .88 (.72), individualized consideration .85 (.71), contingent reward .87 (.82), management-by-exception .79 (.62), laissez-faire .77 (.60), extra effort .82 (.73), effectiveness .93 (.67), and satisfaction .95 (.92). Six month test-retest reliabilities for the Rater and Self-Ratings versions were as follows: idealized influence .79 (.60), inspirational motivation .66 (.45), intellectual stimulation .66 (.61), individualized consideration .77 (.70), contingent reward .52 (.44), management-by-exception .61 (.74), laissez-faire .82 (.73), extra effort .62 (.44), effectiveness .73 (.56), and satisfaction .85 (.59). Bass and Avolio (1990) recommend using followers' descriptions of leaders for research purposes due to the higher reliabilities and leaders' tendency to inflate their ratings by comparison with those of their followers.

Multifactor Leadership Questionnaire Scores

The Multifactor Leadership Questionnaire determines the degree to which a leader is rated as a transformational leader by analyzing scores obtained for each of the four factors comprising the transformational leadership construct. These four factors idealized influence, individualized consideration, intellectual stimulation, and inspirational motivation are operationalized by assigning a numeric value to each possible response making up their respective subscales on the questionnaire. The response options are scored on a scale ranging from "frequently, if not always" equal to "4" to "not at all" equal to "0". A sum of the responses for all items in a factor subscale divided by the number of items in that subscale provided a mean score for that factor. Normative information (Bass & Avolio, 1990) for a combined sample of 1,006 followers describing their immediate supervisors in mostly high-technology and manufacturing industries produced the following average factor scores: idealized influence (2.46), individualized consideration (2.35), intellectual stimulation (2.43), inspirational motivation (2.17), and contingent reward (1.75). Means for a sample of 251 supervisors' self-ratings were higher for all of these factor scales calculated as: idealized influence (2.90), individualized consideration (3.10), intellectual stimulation (2.93), inspirational leadership (2.36), and contingent reward (2.16).

In this study, Bass and Avolio's (1990) recommendation to use followers' descriptions of leaders for research purposes because of the higher reliabilities was followed. Lastly, in order to allow whole sample analyses of the data obtained, a single score on transformational leadership will be calculated. According to Seltzer, Numerof, and Bass (1987) although the factors uncovered by Bass (1985) are conceptually different and form independent clusters of items, these factors are intercorrelated, and a single score on transformational leadership can be meaningfully calculated for selected studies and analyses.

School Organizational Factors Questionnaire

The second questionnaire instrument used in this study was developed by Rosenholtz (1989) to study teaching as a social construction in effective elementary schools. The questionnaire collected information on teachers' perceptions of their workplace conditions and on a number of teacher background characteristics. The 164 item questionnaire elicited five-point Likert responses that ranged from "strongly disagree" to "strongly agree" or from "almost never" to "almost always." Negatively and positively worded items were alternated throughout the questionnaire to offset a unidirectional response set. Scales were constructed from the questionnaire items to measure specific social organizational variables of schools. Rosenholtz determined the internal consistency of teacher responses within each school by dividing the skewness of the five factor measures (goal consensus, teacher collaboration, teachers' learning opportunities, teachers' instructional certainty, and teacher commitment) by their standard error of skewness. The quotients produced for only six of 78 schools exceeded a value of 2.54 which delimited a 95% confidence level. Due to a nonhomogeneous response pattern among teachers, these six schools were considered extreme outliers. Therefore, in the remaining 72 schools only slight variations in teachers' perceptions of their workplace conditions existed. Through factor analysis the variables showed strong communality (on average .62) indicating that where teachers perceived high degrees of one factor, they tended to perceive high levels

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of the other four factors. An Eigenvalue of 8.58 was obtained explaining 89% of the variance between the four scores.

Scale Reliabilities of the School Organizational Factors Questionnaire

The scales measuring separate social organizational variables were combined to construct five major factors. The Cronbach alpha value and item-to-scale correlations in parentheses were determined (Rosenholtz, 1989) for the scales representing each social organizational variable. The factor, shared school goals, was comprised of seven scales: shared teaching goals .70 (.19 to .32) based on 6 items; school goal-setting .73 (.17 to .40) based on 6 items; teacher recruitment .56 (.30 to .44) based on 3 items; teacher evaluation .73 (.21 to .57) based on 9 items; teacher socialization .71 (.26 to .62) based on 4 items; isolation/cohesiveness .74 (.20 to .53) based on 7 items; and managing student behavior .77 (.43 to .65) based on 5 items. A correlation matrix of these social organizational variables showed each was moderately to strongly correlated with the others ranging from .39 to .84 and with the factor, shared school goals, .54 to .56.

A second factor, teacher collaboration, was comprised of five scales: collaboration .63 (.14 to .45) based on 7 items; teachers' certainty about a technical culture and instructional practice .70 (.27 to .48) based on 11 items; involvement in decision-making .69 (.36 to .56) based on 5 items; shared teaching goals as described above; and team teaching based on only two items therefore scale items could not be computed. Except for a weak correlation between team teaching and teacher certainty, each variable was moderately related to each other ranging from .39 to .68 and to the factor, teacher collaboration, .49 to .56.

A third factor, teacher learning, was comprised of scales: teachers' learning opportunities .78 (.32 to .63) based on 8 items, and scales described above: school goal-setting, teacher evaluation, involvement in decision-making, teacher collaboration, and shared teaching goals. All social organizational variables displayed moderate to strong correlations with the factor ranging from .60 to .83 and low to moderate intercorrelations .38 to .75.

A fourth factor, teacher certainty, was comprised of the two scales positive feedback (or psychic reward) .68 (.26 to .45) based on 7 items and parent involvement in children's learning .53 (.19 to .29) based on 4 items, and four scales described above: teachers' learning opportunities, teacher collaboration, teacher evaluation, and managing student behavior. All of these social organizational variables showed at least moderate relationships with the factor ranging from .43 to .69.

The remaining factor, teacher commitment, was composed of the two scales teacher commitment .82 (.36 to .67) based on 12 items and task autonomy and discretion .61 (.25 to .48) based on 8 items, and four other scales described above: learning opportunities, positive feedback, managing student behavior, and teacher certainty. These social organizational variables revealed moderate to strong correlations with the factor ranging from .45 to .75 and moderate intercorrelations, .41 to .69, except for a weak relationship between teacher certainty and autonomy and discretion.

School Organizational Factors Questionnaire Scores

The School Organizational Factors Questionnaire determines the level of presence within a school of social organizational factors associated with effective schools by analyzing scores obtained for each of five factors comprising a school effectiveness construct. The five factors -- goal consensus, teacher collaboration, teachers' learning opportunities, teachers' instructional certainty, and teacher commitment--are operationalized by assigning a numeric value to each possible response comprising their respective subscales. Response options range from "strongly disagree" or "almost never" scored as "0" to "strongly agree" or "almost always" scored as "4". In Rosenholtz's (1989) study, scores were computed for factor subscales on a school wide basis. In this proposed study, school wide means were calculated to obtain a social organization score associated with each principal by summing teacher responses to each item comprising the five factor subscales and dividing by the total number of items.

Validity of Instruments

Validity of the Multifactor Leadership Questionnaire was established by Bass and his colleagues, then further supported through research in educational settings. In validating his model, Bass (1985) used data from 104 military officers who had completed his Leadership Questionnaire describing their superiors and performed a principal components factor analysis. Two subsequent factor analyses using a newly developed version of the Leadership Questionnaire, the Multifactor Leadership Questionnaire, Form 5, were carried out. Bass and Avolio (1990) commented that:

> ...the factors comprising the MLQ have been conceptually and empirically derived from two independently conducted factor analyses (Bass, 1985) using the principal components method with varimax rotation, and they have maintained almost the same structure in two replications of the original factor analyses. (Hatter & Bass, 1988; Seltzer & Bass, in press) (p. 19)

The School Organizational Factors Questionnaire was developed by Rosenholtz (1989) to study teaching as a social construction in effective elementary schools. Her study used the theoretical framework developed earlier (Rosenholtz, 1985) to abridge summaries of the "effective schools" research. She broadly viewed this study as one of "effective" schools and of teaching as a social construction. Since The School Organizational Factors Questionnaire was explicitly designed for Rosenholtz's (1989) study, no prior validity data on the instrument were available.

Data Collection

Eighteen elementary school principals and their faculties from one school district served as the sample for this study. Following district permission to conduct the study, a mailing list of teachers' school addresses was obtained for each school. In January 1996 via the districts' inter-school mailing service, teachers within each elementary school received an envelope containing an explanatory letter of the study's purpose, a questionnaire composed of the Rater's Form of the Multifactor Leadership Questionnaire and the Social Organizational Factors Questionnaire, a return envelope, and a postcard verifying participation. At the same time, principals received an envelope containing an explanatory letter of the study's purpose, a questionnaire composed of the Self-Rating Form of the Multifactor Leadership Questionnaire, and a return envelope. Principals were not given a postcard because of their known affiliation to only one school.

Follow up correspondence to principals was conducted on four occasions in the same manner approximately every two weeks. Non-respondent principals were supplied with a new survey upon each contact. Teachers were encouraged to return surveys two weeks after the initial mailing and were sent a reminder letter after that date passed. Teachers were provided new surveys four weeks following the initial mailing and again were prompted to complete their surveys after two more weeks passed. Finally, a collection of blank teacher surveys were sent to principals who were encouraged to inform teachers in need of another survey that additional ones were available in the school's main office. Responses to the Multifactor Leadership Questionnaire and the School Organizational Factors Questionnaire were coded and entered into an SPSS data file.

Preliminary Data Analyses

To improve the effectiveness of the School Organizational Factors Questionnaire (Rosenholtz, 1989) and Multifactor Leadership Questionnaire (Bass &

Avolio, 1990), approximately 8-10 current or former public school teachers reviewed and completed the instruments. These individuals were solicited for feedback on: (a) the clarity of the questions and terminology, (b) the flow and logical order of the questions, and (c) the time required to complete the survey. Their feedback was positive concerning the clarity and organization of the questions. No one suggested the questionnaire was too time consuming.

Following data collection from the sample using the Multifactor Leadership Questionnaire and the School Organizational Factors Questionnaire, descriptive statistics were used to classify, summarize, and describe the data. Frequencies and means were used to describe the characteristics of the sample in this study. Means were also used to analyze teacher responses to the two survey instruments. Reliability values were determined for this sample on all scores by computing Cronbach alphas for scales on both the Multifactor Leadership Questionnaire and the School Organizational Factors Questionnaire.

Analysis Procedures of Research Questions

The purpose of this study was to examine the relationship between principal's use of transformational leadership strategies and the presence of social organizational factors in the schools they lead. Rosenholtz's (1985, 1989) theoretical framework outlined the social organization of effective schools. Since transformational leaders work to promote group members' professional growth and commitment associated with increased performance and organizational effectiveness (Bass, 1985), in this study measures of principals' effective use of transformational leadership strategies were compared to Rosenholtz's five social organizational factors applied to their schools. If principals who score high on transformational leadership are predominantly found in schools evidencing high social organization, the continued use of transformational methods appears warranted.

The three research questions that guided this study and the analytical procedures used to investigate each follow. Alpha was set at .05 for all analytical procedures used to test hypotheses associated with the research questions.

Research Question One

In order to support its use, the first research question explored: Is Bass and Avolio's (1990) Multifactor Leadership Questionnaire an appropriate measure of transformational leadership in educational settings? Analyzing this question required comparing transformational leadership factor scores reported by teachers and principals throughout the entire sample with results reported in the business setting. A comparison of the results to Bass' prior work followed. Specific attention was given to the mean value and relative ranking of the mean factor scores reported by teachers and principals. Whether principals demonstrated higher self-ratings than teachers assign them, as do leaders relative to subordinates in other settings, was also of interest.

Research Question Two

The second research question investigated: Are high transformational principals associated with schools which evidence high social organization? Three conceptual hypotheses were formulated to operationalize this research question for subsequent analysis. The first conceptual hypothesis asked: Is there a relationship between teachers' report of their principals as transformational leaders and their schools' social organization? To analyze this question required correlating these two sets of scores for the entire sample. The null hypothesis under consideration was: The Pearson product moment coefficient between teachers' ratings of their principals' transformational leadership level and ratings of their schools' social organization equals zero. The alternative hypothesis stated that the Pearson product moment coefficient between teachers' rating of their principals transformational leadership level and ratings of their schools' social organization does not equal zero. The inferential procedure used tested the null hypothesis of the correlation coefficient equal to zero.

The second conceptual hypothesis inquired: Are principals in high transformational (TF) principal-led schools substantially different in terms of transformational leadership from principals in low TF principal-led schools? The analysis of this question required testing a null hypothesis that teachers' mean transformational leadership rating for schools with high TF principals is not different than for schools with low TF principals. The alternative hypothesis stated that teachers' mean transformational leadership ratings in high TF principal-led schools would be greater than in low TF principal-led schools. The inferential procedure used to test the null hypothesis was the one-sample case for independent means.

The third conceptual hypothesis asked: Are high transformational principals predominantly found in schools evidencing high social organization? The analysis of this question required testing a null hypothesis that teachers' mean social organization rating for schools with high TF principals is not different than for schools with low TF principals. The alternative hypothesis stated that teachers' mean social organization ratings in high TF principal-led schools would be greater than in low TF principal-led schools. The inferential procedure used to test the null hypothesis was the one-sample case for independent means. The t-test statistic was computed for testing the difference between social organization mean scores for the two principal groups.

Research Question Three

The third research question addressed: What other variables may account for teachers' report of their principals' as high transformational leaders? In this study, six potential intervening variables were considered that potentially explain teachers' report of their principals use of transformational leadership. They include: (1) teachers' gender, (2) principals' gender, (3) teachers' ethnicity, (4) teachers' number of years worked with their principal, (5) principals' length of service in their present building, and (6) staff size. An analysis of this research question involved testing the following six null hypotheses:

1. There is no difference between male and female teachers' group mean transformational leadership ratings for principals.

2. There is no difference in teachers' group mean transformational leadership ratings between male and female principals.

3. Across four ethnic classifications of teachers, there is no difference in teachers' group mean transformational leadership ratings for principals.

4. There is no relationship between teachers' years worked with their current principal and principals' transformational leadership scores.

5. There is no relationship between principals' years of service within their present building and teachers' ratings of principals' transformational leadership.

6. There is no relationship between school staff size and teachers' ratings of principals' transformational leadership.

To analyze the first null hypothesis required comparing the group mean transformational leadership scores for principals reported by male and female teachers. The inferential procedure used to test this null hypothesis was the one-sample case for independent means. The t-test statistic was computed to test the population value of the difference between group mean transformational leadership scores for principals reported by male and female teachers.

The second null hypothesis addressed whether a difference existed between principals' gender and teachers' transformational leadership ratings of them. The analysis of this null hypothesis required comparing teachers' mean transformational leadership scores for principals grouped as either male or female. The inferential procedure used to test the null hypothesis was the one-sample case for independent means. The t-test statistic was computed for testing the population value of the difference between transformational leadership mean scores for principals grouped as either males or females.

The third null hypothesis tested whether a difference existed between teachers' ethnicity and their transformational leadership ratings of their principals. An analysis of this null hypothesis required comparing the mean transformational leadership scores reported by teachers' among each of four ethnic classifications. The inferential procedure used was a one-way ANOVA. The F statistic and its probability value was computed for testing the variability among the four teacher ethnicity classifications. The fourth null hypothesis examined whether there was a relationship between teachers' years worked with their current principal and their principals' transformational leadership ratings. The analysis of the null hypothesis required calculating The Pearson product moment coefficient for teachers' years worked with their current principal and their principals' transformational leadership ratings. The inferential procedure used tested the null hypothesis of the correlation coefficient equal to zero. The Pearson product moment coefficient and its probability value was computed for testing the relationship between the variables of interest.

The fifth null hypothesis examined whether there was a relationship between principals' years of service within their present building and principals' transformational leadership ratings. The analysis of the null hypothesis required calculating The Pearson product moment coefficient between principals' years of service within their present building and their principals' transformational leadership ratings. The inferential procedure used tested the null hypothesis of the correlation coefficient equal to zero. The Pearson product moment coefficient and its probability value was computed for testing the relationship between the variables of interest.

The final null hypothesis examined whether there was a relationship between school staff size and principals' transformational leadership ratings. The analysis of the null hypothesis required calculating The Pearson product moment coefficient between school staff size and principals' transformational leadership ratings. The inferential procedure used tested the null hypothesis of the correlation coefficient equal to zero. The Pearson product moment coefficient and its probability value was computed for testing the relationship between the variables of interest.

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CHAPTER IV

PRESENTATION OF DATA AND ANALYSES

This chapter presents findings of analyses associated with three research questions that guided this study. A discussion of these findings was organized under three sections. The first section addressed characteristics of the instruments used in the study. The second explored the primary issue of the study, that is, the nature of the relationship between the two constructs transformational leadership and school social organization associated with effective schools. The third section examined alternative explanations for the relationship observed between transformational leadership and school social organization. General characteristics of the sample and respondents, and threats to the study's validity are also presented.

General Description of the Sample and Respondents

The school district selected for this study is located in southwestern Michigan. Based on 1994-1995 data, teachers within the district varied in ethnicity as follows: White 658 (83.7%), African-American 109 (13.9%), Hispanic 13 (1.7%), and "Other" 6 (0.7%). The turnover rate, taking all reasons into account including retirement and relocation, was 8.2% Throughout the eighteen elementary schools, female teachers were in greater numbers, 348 (85.7%) than males, 50 (14.3%). Female principals also led more schools, 13 (72.2%) than males, 5 (27.8%). Elementary principals varied as follows in ethnicity: White 11 (61.1%), African-American 6 (33.3%), and Hispanic 1 (5.6%). Principals were distributed equally, 6 (33.3%), across the following time ranges in terms of their years of service in their present buildings: (a) 0 to 2.5 years, (b) over 2.5 to 6.5 years, and (c) over 6.5 years. Of the eighteen elementary schools, six had faculty sizes over 30, three were between twenty and twenty-nine, and nine were below twenty. The district reflected both urban and suburban residential areas.

There were 398 potential teachers in the study. A total of 214 or 54% of the potential teacher respondents returned usable surveys. Of eighteen potential principal respondents, seventeen participated. The response rate from the staff in individual schools ranged from 25% to 88%. The researcher eliminated certain schools from further consideration due to low response rates and other reasons explained below.

The researcher excluded four of the eighteen schools from analyses for the following reasons. Two schools, identified in Table 1 as "A" and "R", were dropped from consideration due to a teacher response rate less than 44%. The larger of these two schools also had its principal replaced at the beginning of the school year due to illness. Two additional schools, "E" and "L", were assigned first year principals and therefore eliminated from the sample on the basis that these principals would not have had sufficient time to develop the necessary rapport with faculty to effectively engage in transformational leadership. Principal "L" was also the non-respondent.

Table 1

Characteristics of Schools Sampled Determining Retention or Exclusion From the Study

School	Return Rate	Principals' Years of Service	Faculty Size	TFL Mean	SOF Mean	Retained or Excluded
A	25%	2.5	12	2.86	2.81	Excluded
B	54%	5.5	13	3.45	3.49	Retained
C	60%	13.5	35	2.67	2.74	Retained
D	55%	10.5	38	2.88	2.78	Retained
E	53%	0.5	15	2.84	2.53	Excluded
F	54%	10.5	13	2.80	2.87	Retained
G	46%	3.5	24	2.36	2.27	Retained
H	50%	10.5	36	2.83	2.86	Retained
I	70%	4.5	10	3.10	2.82	Retained
J	61%	10.5	28	3.28	2.82	Retained
K	57%	2.5	14	2.85	2.77	Retained
L	62%	0.5	13	2.47	2.70	Excluded
M	50%	2.5	8	3.43	3.07	Retained
N	44%	3.5	32	1.98	2.55	Retained
O	59%	5.5	22	2.97	2.83	Retained
P	58%	5.5	19	2.65	2.90	Retained
Q	88%	2.5	32	2.10	2.57	Retained
R	26%	30.5	34	2.64	2.84	Excluded

Examination of Research Instruments

This section reports on the use of the instruments in this study. For Bass and Avolio's (1990) Multifactor Leadership Questionnaire, parallels are drawn between its performance in this educational setting and Bass' norms reported for his prior work (1985; 1990) in business. Reliabilities derived from this study are presented for Bass and Avolio's instrument and Rosenholtz's (1989) School Organizational Factors Questionnaire.

Use of the Multifactor Leadership Questionnaire in Education

The researcher examined the first research question by determining whether the pattern from using the Multifactor Leadership Questionnaire in an educational setting parallels Bass' reported results in business settings. The Multifactor Leadership Questionnaire determines the degree to which a leader is rated a transformational or transactional leader by analyzing scores obtained for each of four factors comprising the transformational leadership construct and in this study one factor representing transactional leadership. The analysis of this question required comparing transformational and transactional leadership factor scores reported by teachers and principals with the results of Bass' (1985, 1990) prior work consisting of a combined sample of 1,006 followers describing their immediate supervisors in mostly high-technology and manufacturing industries.

Response options to items describing leadership behavior were scored on a five point Likert scale ranging in degree of agreement from "not at all" equal to "0" through "frequently, if not always" equal to "4". A sum of the responses for all items in a factor subscale divided by the number of items in that subscale provided a mean score for that factor. Attention was given to the mean value and relative ranking of the mean factor scores reported by teachers and principals. Whether principals demonstrated higher self-ratings than teacher ratings was also of interest. Table 2 summarizes the mean comparisons for transformational and transactional leadership factors reported by participants in this study and in Bass' earlier work.

As shown in Table 2, principals self-rated themselves higher than did the teachers they lead which is consistent with Bass' (1985; 1990) findings comparing leaders and subordinates relative ratings. All groups of individuals ranked contingent reward last which also coincided with Bass' findings that indicated subordinates seemed to desire more from leadership than just contingent reward interactions. Another similarity to Bass' findings for business leaders rated by their subordinates was that the average frequency of principals' perceived display of transformational leadership factors by teachers was always greater than two, or "sometimes". Furthermore, the scale ranked first by teachers (inspirational motivation) was ranked fourth by subordinates in non-educational settings. The remaining scales were ranked in the same order by the two groups. While leaders in business and industry ranked individual consideration first, principals ranked it fourth. Again, the remaining scales were ranked in the same order by the two groups. Finally, teachers' and principals' mean scores were higher for all Multifactor Leadership Questionnaire scales (except for principals' self-rating on contingent reward) than subordinates' and leaders' mean scores as reported in Bass' work.

Table 2

Comparison of Teachers', Principals', and Bass' Mean Transformational and Transactional Leadership Factor Scores

Factors	Teachers (n=186)	Rank	Bass Subordinates	Rank
Idealized Influence	2.82	2	2.46	1
Inspirational Motivation	2.94	1	2.17	4
Intellectual Stimulation	2.63	3	2.43	2
Individualized Consideration	2.36	4	2.35	3
Contingent Reward	2.08	5	1.75	5
	Principals (n=17)	Rank	Bass Leaders	Rank
Idealized Influence	3.78	1	2.90	3
Inspirational Motivation	3.65	2	2.36	4
Intellectual Stimulation	3.43	3	2.93	2
Individualized Consideration	3.40	4	3.10	1
Contingent Reward	2.13	5	2.16	5

Characteristics of the School Organizational Factors Questionnaire

The second instrument used, the School Organizational Factors Questionnaire, was adapted from Rosenholtz's (1989) original work studying teaching as a social construction in effective elementary schools. Questionnaire scales were constructed from items to measure specific social organizational variables of schools. The questionnaire collected information on teachers' perceptions of their workplace conditions by eliciting five-point Likert scale responses that ranged from "strongly disagree" equal to "0" to "strongly agree" equal to "4". Mean values and rankings for the scales comprising this instrument are displayed in Table 3.

Table 3

Comparison of Teachers' Mean Ratings for Social Organizational Factors (n=186)

	Mean	Rank
Teacher Commitment	2.93	1
Teacher Instructional Certainty	2.93	1
Teacher Collaboration	2.73	3
Shared School Goals	2.58	4
Teacher Continuous Learning	2.45	5

Table 3 shows that all scale means were above average on the five point Likert scale. The two scales with the largest means, teacher commitment (2.93) and teacher instructional certainty (2.93), were equal. The range of the scale means spanned from a low of 2.45 (teacher continuous learning) to a high of 2.93 (teacher commitment and teacher instructional certainty). An overall single score mean for school social organization of 2.76 was achieved.

Intercorrelations among the variables were all significant (p = 0.00), positive in direction, and moderate to high in magnitude. They ranged from a low of r = 0.63 (shared school goals and teacher instructional certainty) through a high of r = 0.91 (shared school goals with teacher continuous learning).

Reliability Check

Survey data were entered into SPSS files. As an error check, ten teacher surveys were randomly selected and printed to compare the accuracy of the data entered against data contained on original surveys. Two mistakes out of 1,420 total comparisons were detected in the data entered resulting in an acceptable error rate of 0.001%.

Cronbach alpha values were calculated for all scales comprising both teachers' and principals' questionnaire. As shown in Table 4, all scales on the Multifactor Leadership Questionnaire had alpha values above 0.90. The alpha values compared favorably for followers reported by Bass and Avolio (1990) which ranged from 0.84 (inspirational motivation) to 0.90 (idealized influence). Scales on the Social Organizational Questionnaire had alpha values ranging from 0.82 (teacher collaboration) to 0.93 (shared school goals). Thus, the scales used in this study had high reliability indexes.

Principals' self-ratings with the Multifactor Leadership Questionnaire, displayed in Table 5, produced alpha values ranging from 0.69 (idealized influence) to 0.87 (contingent reward). All of these self-rated scales had lower reliability indexes compared with teachers' ratings. Bass and Avolio (1990) reported a slightly larger range of 0.60 (inspirational motivation) through 0.83 (idealized influence).

Table 4

Reliability Analysis of Teachers' Questionnaire Scales (n=160)

Scales	Alpha Values
Multifactor Leadership Questionnaire	
Intellectual Stimulation	0.94
Individualized Consideration	0.94
Contingent Reward	0.94
Inspirational Motivation	0.93
Idealized Influence	0.92
Social Organizational Factors Questionnaire	
Shared School Goals	0.93
Teacher Commitment	0.92
Teacher Continuous Learning	0.90
Teacher Instructional Certainty	0.86
Teacher Collaboration	0.82

Table 5

Reliability Analysis of Principals' Questionnaire Scales (n=17)

Scales	Alpha Values
Multifactor Leadership Questionnaire	
Contingent Reward	0.87
Individualized Consideration	0.77
Inspirational Motivation	0.76
Intellectual Stimulation	0.72
Idealized Influence	0.69

Additionally, a correlation matrix was created between the transformational/ transactional leadership factor scales comprising Bass and Avolio's Multifactor Leadership Questionnaire on one axis and five scales representing Rosenholtz's social organizational factors on the other axis. All correlations were found significant with p = 0.00. The correlation matrix in Table 6 showed that intellectual stimulation was the transformational leadership factor most highly correlated with the social organizational factor, teacher continuous learning (r = 0.70). The transformational leadership factor, individual consideration, was most highly

Table 6

Correlation Coefficients of Leadership Factors and Social Organizational Factors (n = 186)

	SGOALS	TCOLL	TLEARN	TCERT	TCOMMIT
II	0.61*	0.46*	0.65*	0.41*	0.66*
INSP	0.61*	0.46*	0.65*	0.42*	0.69*
IS	0.63*	0.47*	0.70*	0.41*	0.69*
IC	0.65*	0.47*	0.69*	0.44*	0.72*
CR	0.42*	0.36*	0.49*	0.38*	0.54*

Note: Scales are abbreviated as follows: SGOALS, Shared School Goals; TCOLL, Teacher Collaboration; TLEARN, Teacher Continuous Learning; TCERT, Teacher Pedagogical Certainty; TCOMMIT, Teacher Commitment; II, idealized influence; INSP, inspirational motivation; IS, intellectual stimulation; IC, individual consideration; CR, contingent reward.
*$p < 0.00$ two-tailed significance test

correlated with three different social organizational factors: teacher commitment (r= 0.72), shared school goals (r = 0.65), and teacher pedagogical certainty (r = 0.44). Intellectual stimulation and individual consideration were equally correlated with the social organizational factor, teacher collaboration (r = 0.47). Contingent reward, a transactional leadership factor, was least correlated with all five social organizational factors which supported Bass and Avolio's (1990) finding that, "Transformational leadership scores were almost uniformly correlated more strongly than transactional scores with higher ratings of organizational effectiveness" (p. 28). Overall, moderate to high correlations between the two sets of factors were observed which ranged from a low value of r = 0.36 to a high of r = 0.72. In general, results obtained using Bass and Avolio's Multifactor Leadership Questionnaire in this study were consistent with a number of Bass' earlier findings. This suggests that additional research using the Multifactor Leadership Questionnaire will produce further opportunities to establish its applicability in education.

This section reported on the instruments used in this study. Parallels drawn between the performance of Bass and Avolio's Multifactor Leadership Questionnaire in education compared to business settings provided mixed support for its continued use in educational contexts. Both instruments were comprised of highly reliable factor scales.

Relationship Between Transformational Leadership and Social Organizational Factors

This section presents results of three statistical tests for hypotheses associated with the second research question intended to illuminate the relationship between transformational leadership and school social organization associated with effective schools. The statistical tests are discussed in the same order that conceptual hypotheses were originally proposed.

Conceptual Hypothesis One

The researcher investigated the first conceptual hypothesis that inquired whether a relationship existed between teachers' report of their principals as transformational leaders and their schools' social organization? To analyze this question required testing a null that the Pearson product moment coefficient between teachers' ratings of their principals' transformational leadership level and ratings of their schools' social organization equals zero. The alternative hypothesis stated that the Pearson product moment coefficient between teachers' ratings of their principals' transformational leadership level and ratings of their schools' social organization was not equal to zero. The inferential procedure used to test whether the correlation coefficient equaled zero rejected the null hypothesis of no correlation between the two sets of scores for the entire sample. Table 7 summarizes the two-tailed statistical test of the null hypothesis using alpha equal to 0.05.

Table 7

Correlation Coefficient for Teachers' Ratings of Principals'
Transformational Leadership and Their Schools'
Social Organization (n=186)

	Mean	SD	r	p
Principals' Transformational Leadership	2.70	0.86	0.70	0.00*
School Social Organization	2.76	0.48		

$^{*}p<0.05$ two-tailed significance test

The tendency for high principal transformational scores to be associated with higher scores for school social organization was found throughout the entire sample (r = 0.70; p = 0.00). Since reliability analyses of the instruments used in the setting of this study established that they were, in fact, highly reliable, additional research questions furthered an exploration into the nature of the relationship observed.

The existence of a relationship between teachers' ratings of their principals' transformational leadership and their schools' social organization does not indicate that it is centered around particular principals rather than certain teachers. Lacking such a relationship for principals precludes attributing any influence of transformational leadership on school organization due to the work of principals. Thus, a relationship needed to be established linking principals associated with high transformational leadership and schools with higher school organizational factor scores. Of particular interest, then, is whether teachers in schools with principals evidencing high transformational leadership also report their principals higher in transformational leadership and their schools higher in social organizational factors, and conversely, do teachers in schools with principals evidencing low transformational leadership also report their principals lower in transformational leadership and their schools lower in social organizational factors.

To establish such a relationship first required locating on a plot teachers' paired mean ratings for their particular principal's level of transformational leadership and their school's social organization. The plot of the fourteen school principals, shown in Figure 1, revealed one cluster of principals high in transformational leadership in schools with high social organization and another cluster of principals low in transformational leadership in schools with low social organization. Several principals were also located in the center of the diagram with middling values of both variables of interest. The absence of a randomly scattered pattern of principals over the diagram suggested that differences may exist among these two clusters of principals either high or low concerning both variables.

Next, to clearly delineate principals into one of the two clusters, teachers' mean transformational leadership and social organizational ratings, including confidence intervals bounded by standard errors, were determined for the group of fourteen principals in schools remaining in the sample (see Figure 1).

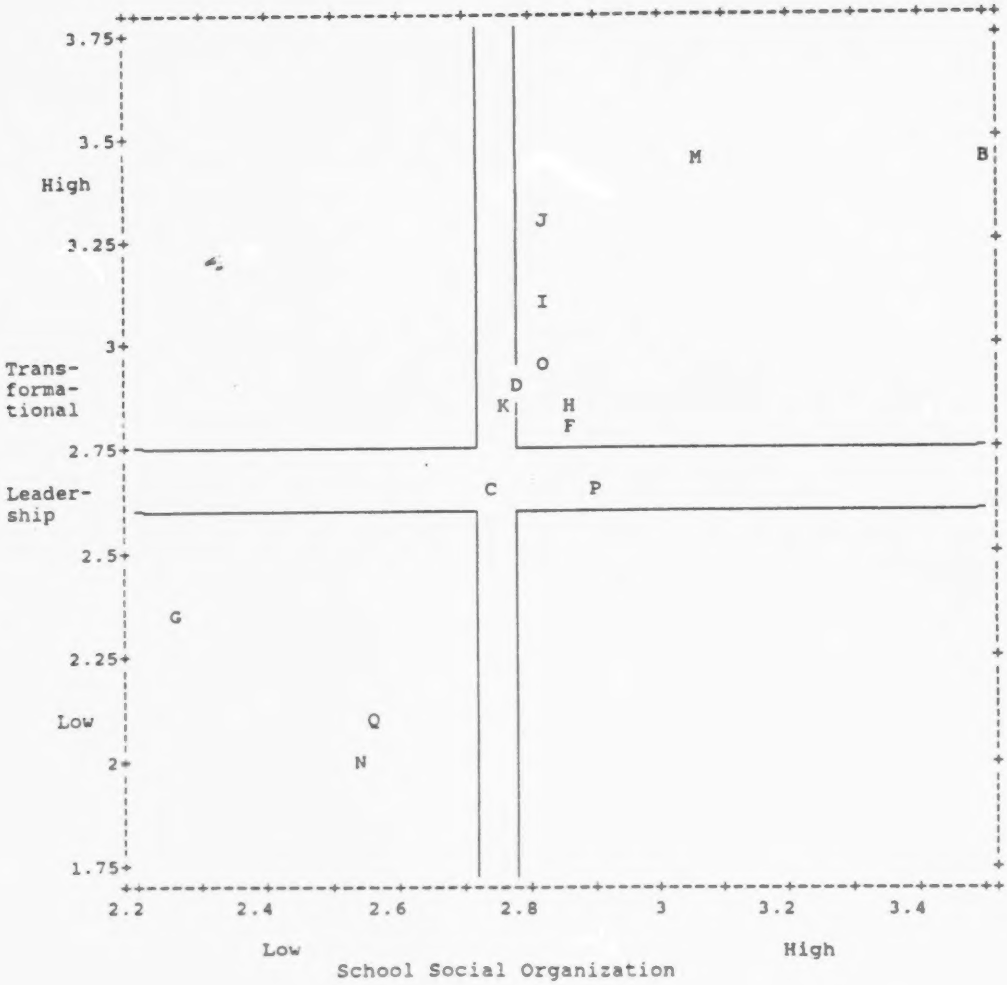

Figure 1. Plot of School Means for Transformational Leadership and School Social Organization.

When overlaid on the diagram, four principals (identified as "C", "D", "K", and "P") were located within the confidence interval surrounding the means for one or both of the two variables. In other words, four principals not clearly delineated into either the high/high or low/low combinations for the transformational leadership and social organization variables were excluded from further consideration.

With the middle group of principals excluded from the study leaving two clusters of principals clearly distinguishable, an exploration followed into differences not due to chance alone between these two clusters of principals concerning their transformational leadership and their schools' social organization.

Conceptual Hypothesis Two

The researcher examined the second conceptual hypothesis which inquired: Are principals in high transformational (TF) principal-led schools substantially different in terms of transformational leadership from principals in low TF principal-led schools? The analysis of this question required testing a null hypothesis that teachers' mean transformational leadership rating for schools with high TF principals is not different than for schools with low TF principals. The alternative hypothesis stated that teachers' mean transformational leadership ratings in high TF principal-led schools would be greater than in low TF principal-led schools. The inferential procedure, the one-sample case for independent means, rejected the null hypothesis concerning the mean transformational leadership scores for the two principal groups. Thus, results demonstrated that schools with high TF principals were rated significantly higher in transformational leadership than were schools with low TF principals. This finding suggests that, for this sample, schools led by high TF principals received higher transformational leadership scores.

Table 8 summarizes the two-tailed statistical test of the null hypothesis using alpha equal to 0.05.

Conceptual Hypothesis Three

The researcher addressed the third conceptual hypothesis which asked: Are high transformational principals predominantly found in schools evidencing high social organization? The analysis of this question required testing a null hypothesis that teachers' mean social organization rating for schools with high TF principals is not different than for schools with low TF principals. The alternative hypothesis stated that teachers' mean social organization ratings in high TF principal-led schools would be greater than in low TF principal-led schools. The inferential procedure, the one-sample case for independent means, rejected the null hypothesis concerning the mean social organizational scores for the two

Table 8

Difference in Teachers' Mean Transformational Leadership Scores Between Schools Led by High TF Principals and Schools Led by Low TF Principals (n = 125)

	n	Mean	SD	p
Schools Led by High TF Principals	72	3.08	0.66	0.00*
Schools Led by Low TF Principals	53	2.12	0.88	
Total	125			

*$p<0.05$ Two-tailed significance test

principal groups. Thus, results demonstrated that schools with high TF principals were rated significantly higher in social organization than were schools with low TF principals. This finding suggests that, for this sample, schools led by high TF principals received higher social organizational scores. Table 9 summarized the two-tailed statistical test of the null hypothesis using alpha equal to 0.05.

In this section, statistical tests demonstrated several relationships between the two constructs transformational leadership and school social organization. These constructs were found significantly correlated throughout the entire sample, and in significantly greater magnitudes in schools led by high transformational principals.

Relationship Between Transformational Leadership and Social Organizational Factors: Alternate Explanations

The researcher addressed the third research question which asked whether

Table 9

Difference in Teachers' Mean Social Organization Scores Between Schools Led by High TF Principals and Schools Led by Low TF Principals (n = 125)

	n	Mean	SD	p
Schools Led by High TF Principals	72	2.91	0.46	0.00*
Schools Led by Low TF Principals	53	2.50	0.45	
Total	125			

*$p<0.05$ Two-tailed significance test

other variables might explain teachers' report of their principals' as high transformational leaders including: teachers' gender, principals' gender, teachers' ethnicity, teachers' number of years worked with their principal, principals' length of service in their present building, and staff size. Statistical tests used to investigate relationships between these potential intervening variables and principals' use of transformational leadership follow.

Teachers' Gender and Transformational Leadership Ratings

Throughout the eighteen elementary schools, female teachers were in greater numbers, 348 (85.7%) than males, 50 (14.3%). The elimination of eight schools from the sample due to low return rates, newly appointed principals, and middling values for principals on transformational leadership or their schools' on social organization, had little effect on the relative distribution of teachers by gender throughout the remaining schools. Female teachers remained more numerous, 232 (86.9%) than males, 35 (13.1%).

The conceptual hypothesis addressed whether a relationship existed between teachers' gender and principals' transformational leadership ratings. The null hypothesis stated that there was no difference in the mean transformational leadership score for principals reported by male versus female teachers. The alternative hypothesis stated that there was a difference in the mean transformational leadership score for principals reported by male versus female teachers. The inferential procedure, the one-sample case for independent means, retained

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the null hypothesis concerning the mean transformational leadership scores reported for principals by male and female teachers. Therefore, teachers' gender as an intervening variable for principals' perceived use of transformational leadership was not shown relevant in this sample. Table 10 summarizes the two-tailed statistical test using alpha equal to 0.05.

Principals' Gender and Transformational Leadership Ratings

The elimination of eight schools from the sample noticeably impacted the distribution of principals by gender throughout the remaining schools. The number of female principals leading schools decreased to 8 (80%) from 13 (72.2%) though their percentage of representation increased. Correspondingly, male principals reduced in number and percentage from 5 (27.8%) to 2 (20%).

The conceptual hypothesis addressed whether a relationship existed between principals' gender and transformational leadership ratings assigned them

Table 10

Difference in Principals' Mean Transformational Leadership Scores Reported by Male and Female Teachers (n = 122)

	n	Mean	SD	p
Male Teachers	12	2.64	0.86	0.85*
Female Teachers	110	2.69	0.89	
Total	122			

*p>0.05

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by teachers. The analysis of the null hypothesis required comparing teachers' mean transformational leadership scores for principals grouped as male or female. The null hypothesis stated that there was no difference in the mean transformational leadership score assigned to male versus female principals. The alternative hypothesis stated that there was a difference in the mean transformational leadership score assigned to male versus female principals. The inferential procedure, the one-sample case for independent means, retained the null hypothesis concerning teachers' mean transformational leadership ratings for male versus female principals. Hence, principals' gender as an intervening variable for principals' perceived use of transformational leadership was not shown relevant in this sample. Table 11 summarizes the two-tailed statistical test using alpha equal to 0.05.

Teachers' Ethnicity and Transformational Leadership Ratings

In the ten schools comprising the modified sample, principals' ethnicity was divided into Whites, eight (80%) and African-Americans, two (20%). The ethnicity of teacher respondents was overwhelmingly White 115 (93.5%), followed by African-Americans, five (4.1%), Others, two (1.6%) and Hispanic, one (0.8%).

The conceptual hypothesis inquired whether a relationship existed between teachers' ethnicity and their transformational leadership ratings of principals. An analysis of the null hypothesis required comparing the mean transformational leadership scores reported by teachers' of four ethnic classifications. The null hypothesis stated that there was no difference in the mean transformational

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Table 11

Difference in Teachers' Mean Transformational Leadership Scores for Male and Female Principals (n = 125)

	n	Mean	SD	p
Scores for:				
Male Principals	16	2.34	1.07	0.19
Female Principals	109	2.72	0.86	
Total	125			

$p > 0.05$

leadership score assigned by teachers of varying ethnic groups. The alternative hypothesis stated that there was at least one transformational leadership mean score difference among the varying ethnic groups. The inferential procedure, a one-way ANOVA, led the researcher to retain the null hypothesis of no difference in teachers' mean transformational leadership ratings among various ethnic classifications. Hence, teachers' ethnicity as an intervening variable for principals' perceived use of transformational leadership was not shown relevant in this sample. Table 12 summarizes the two-tailed statistical test using alpha equal to 0.05.

Years With Principal, Years as Principal, and Faculty Size

Three potential intervening variables -- teachers' years worked with the principal, principals' years of service in their present building, and staff size --

Table 12

Differences in Teachers' Transformational Leadership Scores for Principals Across Teacher Ethnic Groups (n = 123)

	n	Mean	SD	p
White	115	2.66	0.90	0.74
Hispanic	1	3.09	--	
African-American	5	2.69	1.15	
Others	2	3.31	0.12	
Total	123			

$p > 0.05$

were regarded as having continuous scale levels of measurement. Thus, the researcher investigated whether a correlational relationship existed between teachers' ratings of their principals' transformational leadership scores and ratings for any of these three variables. An analysis for these correlational relationships required testing separate null hypotheses that the Pearson product moment coefficient equaled zero between teachers' ratings of their principals' transformational leadership and teachers' years worked with the principal, principals' years of service in their present building, and staff size. The alternative hypothesis associated with the three null hypotheses stated that the Pearson product moment coefficient was not equal to zero between teachers' ratings of their principals' transformational leadership level and teachers' years worked with the principal, principals' years of service in their present building, and staff size. The inferential procedure used to test whether the correlation coefficient equaled zero rejected the null hypothesis of no correlation between principals' transformational leadership ratings and the two variables, principals' years of service in their present building and staff size. The null hypothesis of the correlation coefficient could not be rejected between principals' transformational leadership ratings and teachers' years worked with their current principal.

The correlation of the three variables teachers' years worked with the principal, principals' years of service in their present building, and staff size with transformational leadership produced the following results. Transformational leadership was found to have a nonsignificant correlation ($p = 0.11$) with the variable teachers' years worked with the principal. Hence, teachers' years worked with the principal was not shown relevant in this sample as an intervening variable for principals' perceived use of transformational leadership. However, transformational leadership had statistically significant ($p = .00$) though low correlations (Hinkle et al., 1988) with two variables: principals' years of service ($r = 0.36$) and a negative correlation with school staff size ($r = -0.31$). This negative correlation indicated that smaller school staff sizes are associated with higher transformational leadership ratings. Consequently, principals' years of service and school staff size may serve to some degree to alternately explain the relationship observed for transformational leadership and the presence within schools of organizational factors associated with effective schools. Table 13 summarizes the correlation data for teachers' years worked with the principal, principals' years of service in their present building, and staff size with transformational leadership.

Table 13

Correlation Coefficients of Transformational Leadership With Potential Intervening Variables (n = 125)

Transformational Leadership	r	p
Teachers' Years Worked with Their Current Principal	0.15	0.11
Principals' Years of Service in Their Present Building	0.36	0.00*
School Staff Size	-0.31	0.00*

*$p < 0.05$ two-tailed significance test

As the only two of six variables significantly related to principals' transformational leadership ratings, principals' years of service in their present building and staff size were also explored for relationships with transformational leadership using a stepwise multiple regression procedure. The variable, principals' years of service, was entered first into the regression model using transformational leadership as the criterion variable and accounted for 12.8% of the variance in the transformational leadership variable. School staff size was entered next into the model and accounted for an additional 12.3% of the variance in the transformational leadership variable. Both variables, principals' years of service and staff size, were found significant predictors ($p = 0.00$) of teachers' transformational leadership ratings accounting for a combined 25.1% of the variance in the transformational leadership variable. Table 14 summarizes the regression analysis for principals' years of service in their present building and staff size with transformational leadership.

In this section, six potential intervening variables were explored for relationships with principals' perceived use of transformational leadership. A relationship between any of these variables and transformational leadership would suggest that they might explain teachers' report of their principals' use of transformational leadership found related throughout the entire sample with school social organization. Of the six potential intervening variables tested for relationships with transformational leadership, only principals' years of service in their present building and staff size were significantly related with principals' transformational leadership scores. Hence, principals' number of years worked within their present

Table 14

Regression Analysis of Transformational Leadership Scores With Principal's Years of Service and School Staff Size (n = 124)

Transformational Leadership	R Square	Beta	Sig T
Principals' Years of Service in Their Present Building	0.251	0.104	0.00*
School Staff Size		-0.037	0.00*

*p < 0.05

building and staff size can not be rejected as relevant variables in explaining the relationship observed between teachers' rating of principals' transformational leadership and their schools' social organization scores.

Threats to the Validity of the Study

A variety of factors may have affected the results obtained. The major threat to the validity of this study resulted from low response rates from several schools. The sample may not have been representative of the population as a whole. Teachers who responded may have been nontypical concerning their motivation to participate and thereby affected principals' and school ratings. For reasons out of the researcher's control, teachers in the sample may have resisted or conversely been enticed to participate due to the sensitive nature of commenting on the leadership performance of their principal and behaviors of their colleagues reflective of the schools' social organization. Additionally, minority groups were under-represented in the sample compared to district demographics which may have reduced the diversity of opinion. Finally, during the course of data collection the district sampled underwent an uncertain multi-million dollar bond election which subsequently passed. Principals leadership in affecting this positive outcome may have influenced teachers' perception of their principals as transformational leaders. These are all factors that may interfere with the validity of this study and limit the generalizability of the results.

CHAPTER V

CONCLUSIONS

Introduction

The purpose of this study was to examine the relationship between principals' use of transformational leadership strategies and the presence of social organizational factors within the schools they lead. This study also investigated how Bass and Avolio's (1990) Multifactor Questionnaire served as a research instrument among educators as opposed to business leaders and subordinates studied in Bass' (1985; 1990) prior work. This chapter is an interpretation and discussion of the findings within the constraints of this study. Conclusions have been drawn and recommendations made for further study as they relate to this study and other related literature.

Discussion of Results

Research Instruments Used

In this study, two research instruments were used. Bass and Avolio's Multifactor Leadership Questionnaire which measures transformational and transactional leadership factors has been used frequently in business and industry settings and to a lesser extent in education. Comparisons are made here regarding the use of Bass and Avolio's instrument in education to norms cited by Bass (1985, 1990) in his earlier work. The other instrument used was The School Organizational Factors Questionnaire adapted from Rosenholtz's (1989) work studying teaching as a social construction in effective elementary schools. High reliability indexes were found for all scales on both instruments (see Table 4, p. 72). Overall, results obtained provided mixed support for the use of Bass and Avolio's Multifactor Leadership Questionnaire in educational settings.

Table 2 (p. 69), presented mean transformational and transactional leadership factor scores reported by teachers and principals in this study and by Bass in his prior work. These data provided evidence that principals self-rated themselves higher than did their teachers. This finding is consistent with Bass' (1990) results obtained in business settings comparing leaders and subordinates relative ratings. As with Bass' work in business settings, all groups in this study ranked contingent reward last. This suggests that teachers in education, like subordinates in business, want more from leadership than just contingent reward interactions. The average frequency of principals' transformational leadership factor ratings by teachers' was greater in value than two for each factor which also coincided with Bass' results for business leaders rated by subordinates. As Bass and Avolio (1990) pointed out, "These mean factor scale values and norms were expected to vary in different organizations" (p. 24). An interesting difference was observed for the scale, inspirational motivation, which was ranked first by teachers but fourth by subordinates in non-educational settings. Similarly, leaders in business and industry ranked individual consideration first whereas principals ranked it fourth. These findings suggest that teachers in this study carrying out school reform initiatives may desire leadership that is inspirational and provides team spirit, enthusiasm, and optimism as they work toward a shared vision more than leadership focussed on individualized attention for growth and achievement.

Relationship Between Transformational Leadership and School Social Organization

The literature reviewed for this study, especially the work of Bass (1985; 1990) and Rosenholtz (1985; 1989), gave cause to speculate that a relationship existed between principals' transformational leadership and schools' social organization associated with effective schools. Transformational principals foster the professional development of group members and promote collaborative school cultures (Leithwood & Jantzi, 1991; Sergiovanni, 1994) which school effectiveness research (Purkey & Smith, 1983; Rozenholtz, 1989) and school restructuring research (Lieberman, 1992) highlight as essential for successful school improvement. Since transformational leadership is best evidenced during periods of organizational change (Bass, 1985; Burns, 1978), transformational leadership has been increasingly recommended for school leaders attempting commitment-based educational reform initiatives (Leithwood, 1993). The results from investigating one research question in this study offered support to speculation that a relationship existed between principals' transformational leadership and schools' social

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organization associated with effective schools. The results demonstrated significant differences between high and low TF principal-led schools strengthening claims that principals' exercise of transformational leadership is an important influence on the development of school social organization associated with effective schools.

An overall relationship between principals' transformational leadership and schools' social organization was found throughout the entire sample. The results of a Pearson product-moment correlation (see Table 7, p. 76) between teachers' ratings of principals' transformational leadership and schools' social organization for the entire sample was r = 0.70 (p = 0.00). Moreover, all transformational and transactional factors were significantly correlated (p = 0.00) with the five social organizational factors. Though contingent reward was positively related to higher levels of each social organizational factor, it was less so than the four transformational factors. This finding coincides with a pattern detected by Bass and Avolio (1990) in which "Transformational leadership scores were almost uniformly correlated more strongly than transactional scores with higher ratings of organizational effectiveness" (p. 28). They further concluded that "the same pattern of leadership correlations with outcomes was repeated when the outcomes were independently obtained 'soft' criteria such as supervisor ratings of performance, and 'hard' criteria, such as financial or productivity measures" (p. 30). Thus, in this study teachers' ratings of principals' transformational leadership displayed a relationship with school social organizational ratings in a pattern consistent with Bass' prior results.

The data provided evidence of a predictive relationship between principals' level of transformational leadership and the presence within their schools of social organizational factors associated with effective schools. These findings suggested that the more the principal is viewed by teachers as a transformational leader, the greater teachers report the enhanced presence within their schools of social organizational factors associated with effective schools.

The relationship observed between ratings of principals' transformational leadership and school social organization was correlational in nature, not causal. Since transformational leaders work to promote group members' professional growth and commitment associated with increased performance and organizational effectiveness (Bass, 1985) the moderate to high positive correlation found in this study's setting may reflect the effectiveness of principals in using transformational leadership strategies to attain successful school improvement initiatives. Principals exercise transformational strategies when they promote teachers' access to learning opportunities, occasions to collaborate and set shared school goals, and provide for them certainty in a technical core of professional practice. These are practices associated with effective schools (Rosenholtz, 1989). Furthermore, external and internal organizational forces may influence the leadership style that emerges within an organization. Transformational leadership is most likely to emerge in organic organizations where leaders are required to provide new solutions, stimulate rapid responses, and develop subordinates (Bass, 1985).

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The nature of this relationship was examined further in two conceptual hypotheses designed to more clearly attribute the relationship observed to the work of certain principals rather than groups of teachers randomly located throughout schools.

A difference in teachers' report of principals' exercise of transformational leadership was investigated between high TF principal-led schools and low TF principal-led schools. The results of a t test (Table 8, p. 80) using teachers' mean transformational leadership scores for high and low TF principal-led schools was statistically significant ($p = 0.00$). These findings suggested that principals exercising higher levels of transformational leadership were found in schools with higher levels of social organization reflective of collaborative/collegial environments associated with effective schools.

The role of principals has shifted to one requiring the practice of transformational leadership strategies with the decentralization of authority from the school district to the school site, with expanded decision-making roles for teachers and parents, and with emerging conceptions of teacher leadership and professionalism (Hallinger, 1992). Effective school leadership now requires problem finding and problem solving skills. In literature reviewed for this study, successful school improvement strategies of principals were found identical to transformational leadership strategies. Leithwood and Jantzi (1991) described the work of a transformational principal as helping to build shared meaning among members of the school staff regarding their purposes, foster norms and beliefs among staff

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members about the contribution one's colleagues may make to one's practices, and encourage individual and group reflection on purposes and practices and how they might be continuously improved. These leadership practices are consistent with Rosenholtz's (1989) characterization of the principal's role in effective schools and the associated social organizational factors.

The possibility of a difference concerning schools' social organization between high TF principal-led schools as contrasted with low TF principal-led schools was investigated. The results of a t test (Table 9, p. 81) using teachers' mean social organization scores for high and low TF principal-led schools was statistically significant (p = 0.00). These findings suggested that schools which had principals higher in transformational leadership also demonstrated higher levels of social organization associated with effective schools. Therefore, the relationship observed between transformational leadership and school social organization is more likely attributable to the efforts of high TF principals than to individuals dispersed throughout the schools.

For this study Rosenholtz's (1989) five social organizational factors associated with school effectiveness were regarded as measures of principals' effective use of transformational leadership strategies in contexts of school reform efforts. In other research (Rosenholtz, 1989), social organizational factors had been shown to be associated with school effectiveness. In this study, schools with high TF principals received greater social organization mean ratings as opposed to schools with low TF principals. The leadership strategies used by these high TF principals may account for the generally collaborative school environments reported. Therefore, schools with higher levels of Rosenholtz's (1989) social organizational factors in conjunction with principals high use of transformational leadership strategies appeared to indicate principals with enhanced efficacy in achieving school reform initiatives.

Alternate Explanations

A number of potential intervening variables were explored that might explain teachers' report of their principals' as high transformational leaders. If found significantly related to the transformational leadership variable, they would pose alternate explanations for the observed relationship between transformational leadership and school social organization associated with effective schools. Such rival explanations were dismissed for all potential intervening variables except school staff size and principals' years of service in their present building.

Transformational leadership had statistically significant (p = .00) correlations with two variables: principals' years of service (r = 0.36) and a negative correlation with school staff size (r = -0.31). Principals' years of service within their present building and school staff size were also found significant predictors (p = 0.00) of teachers' transformational leadership ratings for the entire sample (Table 14, p. 89). Together they accounted for approximately 25% of the variance in the transformational leadership variable. Principals' years of service within their present building accounted for 12.8% of the variance in the transformational leadership variable, whereas school staff size accounted for 12.3%. To some extent then, these two variables deserve attention as alternate explanations for the relationship observed between principals' transformational leadership and schools' social organization.

The overall relationship between principals' transformational leadership and schools' social organization along with differences observed for these two variables between high and low principal-led schools may to some degree be explained by the difference in principals' average years of service within their present building. The principals of high TF principal-led schools had worked in their present building about seven years compared to slightly more than three years for low TF principal-led schools. Transformational leadership and organizational change literature both emphasize the need for leaders of second order organizational change to set long range visions and goals. Hence, three years working within the same building may not realistically be sufficient time in which to expect to observe the intended affects of the work of transformational principals.

School staff size was also a potential intervening variable explaining to some extent the observed relationship between transformational leadership and school social organization along with differences observed between high and low TF principal-led schools. High TF principal-led schools had an average staff size of approximately nineteen individuals compared to slightly more than twenty-nine in low TF principal-led schools. Faculty size potentially shapes the effect of principals' use of transformational leadership depending on the ease of teacher and administrator contact (Rosenholtz, 1989). It may be the case that in schools with smaller staff sizes more opportunities for substantive interaction occurred. Alternately, schools with smaller staff sizes may have developed more intimate work groups which are responsible for the high social organization ratings observed than is the work of a TF principal.

Conclusions

The efficacy of achieving school improvements that enhance a school's social organization in ways associated with effective schools is closely related to the principal's leadership style. The emerging demand on principals to act as organizational change agents prompted the need to determine whether transformational leadership as described by Bass (1985; 1990) was being exercised among a group of principals in a district undergoing school reform. If so, did a relationship exist between principals' transformational leadership and the presence within schools of social organizations associated with effective schools, and could this relationship be attributed to the leadership efforts of certain principals.

The findings of this study provided mixed support for the use of Bass and Avolio's (1990) Multifactor Leadership Questionnaire in educational settings. Findings of this study also suggested that a positive correlational relationship existed between principals' transformational leadership and the presence of school social organization associated with effective schools. This study suggests that principals within the district sampled, as a whole, practiced high levels of transformational leadership. Moreover, principals grouped high in transformational leadership demonstrated greater levels of both transformational leadership and school social organization than did principals in low TF principal-led schools. These observed differences between the principal groups provided evidence that higher TF principals were associated with schools that demonstrated enhanced levels of social organization reflective of effective schools. Additionally, two intervening variables, principals' years of service within their present building and school staff size, were found significant predictors of principals' transformational leadership, and therefore, pose rival explanations to the observed relationship between principals' transformational leadership and schools' social organization.

Recommendations

As discussed in the literature review for this study, limited research is available on the practice of transformational leadership in educational settings. Therefore, although this study has added to the existing body of research, additional inquiry would be appropriate.

The following recommendations for future study are suggested:

1. Replication studies should be conducted to validate the relationships found.

2. The sample size for future studies emphasizing school level analysis should be expanded, and if feasible, be representative of the population of schools.

3. Studies should be conducted which examine relationships between transformational leadership and school level (e.g., middle or high school). These studies should investigate relationships between transformational leadership and characteristics of the principals and schools especially the intervening variables found in this study: school staff size and principals' years of service in their present building.

4. Studies should be carried out with broader or narrower scopes. Broader scopes could investigate the influence of transformational leadership on district policy making. Narrower scopes could examine the attitudes and behaviors of principals practicing transformational leadership within schools.

5. Studies which investigate transformational leadership in education should supplement quantitative methods with qualitative methods. For example, these studies could conduct in depth interviews with principals, teachers, and community members; collect observations by trained observers; convene focus groups; or develop case studies of select schools.

6. Studies should be conducted that investigate a relationship between transformational leadership and some measure of student academic performance as indicators of the ability of schools to enhance students' ultimate capacity to be successful.

7. Future studies should explore the variables that inhibit schools with either high TF principals and low social organization or low TF principals and high social organization from developing to higher levels of both variables.

Appendix A

Permission to Use the MLQ

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Burlington, MA
Ronald S. Carlson
Manager (Retired)
Technical Resource Development, IBM
Eugene J. Eckel
President & CEO (Retired)
AT&T Network Systems International
Hilversum, The Netherlands
David S. Fischel
Assistant Superintendent
Maine-Endwell Schools
Gian Franco Gambigliani
Chief Executive Officer
ISVOR-Fiat
Turin, Italy
Michael J. Hastrich
Controller, Revere
Corning Incorporated
Corning, NY
Jim D. Jones
Division Manager
New York State Electric & Gas
Auburn, NY
Peter V. McGinn
Vice President, Human Resources
United Health Services
Paul E. Slobodian
Vice President, Total Quality &
Human Resources
Universal Instruments
John G. Spencer, Chair
Executive Director
United Way of Broome County

Name____________________
(Thomas Evans) 4/14/95
(Please sign and return to show agreement with this letter.)

February 8, 1995

Mr. Thomas Evans
Doctoral Associate
Western Michigan University
994-3B Richmond Court
Kalamazoo, MI 49009

Dear Mr. Evans:

This is in reply to your request to use the MLQ in your study.

Enclosed please find a copy of an experimental form 5X for self and raters and the scoring key. They should be reproduced only for your own research use.

You should use the instruments in their entirety. Also, please be sure to cite the title and authors on the lead page of our survey. You must also indicate the copyright at the bottom of each page e.g., © Bass & Avolio, 1991, if you are inserting the MLQ in a larger survey. If absolutely necessary to reduce, please eliminate entire scales rather than some items from some scales.

We will appreciate also receiving a copy of the results of your research effort. In addition, please provide us with the raw data on the MLQ on a 3 1/2" disk (see attached "suggested standard format" guidelines), so that we would be able to add it to our normative data base.

If you have the budget to do so, or are supported by a grant, we would appreciate your making a contribution to the Center for Leadership Studies of $2.00 U.S. for each of the copies of 5x you reproduce. You can do this by making a check payable to:
RESEARCH FOUNDATION - ACCT # 240-1586A

Cordially,

Bernard M Bass
Bernard M. Bass

BMB/sb
(mlq.for)
Enclosure: Form 5X and key

Center for Leadership Studies, Binghamton University, State University of New York
PO Box 6000, Binghamton, NY 13902-6000 Tel (607) 777-4181 Fax (607) 777-4188
Director: Tel (607) 777-3007/4028 E-mail: BG1584@bingvmb.cc.binghamton.edu

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Appendix B

Human Subjects Institutional Review Board Approval

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Human Subjects Institutional Review Board

Kalamazoo, Michigan 49008-3899
616 387-8293

WESTERN MICHIGAN UNIVERSITY

Date: January 10, 1996

To: Thomas Evans

Richard A. Wright

From: Richard Wright, Chair

Re: HSIRB Project Number 96-01-07

This letter will serve as confirmation that your research project entitled "Elementary teachers' and principals' perceptions of principal leadership style and school social organization" has been approved under the exempt category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you must seek specific approval for any changes in this design. You must also seek reapproval if the project extends beyond the termination date. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: January 10, 1997

xc: Zoe Barley, EDLD

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